



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 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
42W 100 to 700 blocks of IL 38 ISGS #3011-68 (Agricultural Land)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.906099 Longitude: -88.437633
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.906099 Longitude: -88.437633

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)]:

Locations (See Attachment A) were sampled within the construction zone adjacent to ISGS #3011-68 (Agricultural Land). Refer to PSI Report for ISGS #3011-68 (Agricultural Land) including Table 4-4, and Figures 4-10A&B and 4-11A&B.

- 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 J107558-1, J107557-8, and J107558-3.

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.

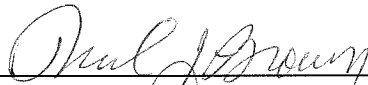
Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown

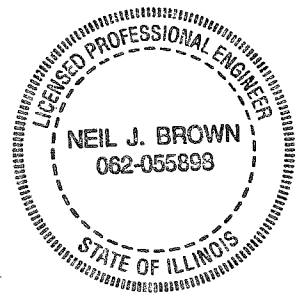
Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16

Date:



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

Attachment A

ISGS# 3011-68 (Agricultural Land)

Analytical results from sample points collected at adjacent properties ISGS# 3011-67 and ISGS# 3011-71 were used to delineate areas of impact.

III (a)

Soil sample points:

- 3011-68-B01
- 3011-68-B08
- 3011-67-B04
- 3011-71-B01

III (b)

Lab packages with associated sample locations

- J107558-1**
- 3011-68-B01
- 3011-68-B08

- J107557-8**
- 3011-67-B04

- J107558-3**
- 3011-71-B01




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-68 (Agricultural Land)		Comparison Criteria			
	3011-68-B01	3011-68-B08	MACs			TACO
BORING	3011-68-B01 (0-1)	3011-68-B08 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
SAMPLE						
MATRIX	Soil	Soil				
DEPTH (feet)	0-1	0-1				
pH	8.93	8.62				
VOCs (None Detected)						
SVOCs (mg/kg)						
Anthracene	0.017 J	0.017 J	12,000	--	--	--
Benzo[a]anthracene	0.11	0.11	0.9	1.8	1.1	--
Benzo[a]pyrene	0.16 †	0.17 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.36	0.29	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.099	0.16	--	--	--	--
Benzo[k]fluoranthene	0.12	0.14	9	--	--	--
Chrysene	0.17	0.17	88	--	--	--
Dibenzo(a,h)anthracene	0.023 J	ND U	0.09	0.42	0.2	--
Fluoranthene	0.3	0.2	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.097	0.13	0.9	1.6	0.9	--
Phenanthrene	0.11	0.094	--	--	--	--
Pyrene	0.35	0.4	2,300	--	--	--
Inorganics (mg/kg)						
Antimony	0.35 J	0.31 J	5	--	--	--
Arsenic	3.1	1.9	11.3	13	--	--
Barium	16	14	1,500	--	--	--
Beryllium	0.17 J	0.18 J	22	--	--	--
Boron	7.9	10	40	--	--	--
Cadmium	0.23	0.16	5.2	--	--	--
Calcium	150,000	160,000	--	--	--	--
Chromium	9.6	11	21	--	--	--
Cobalt	3.6	2.9	20	--	--	--
Copper	13	13	2,900	--	--	--
Iron	6,800	7,500	15,000	15,900	--	--
Lead	58	40	107	--	--	--
Magnesium	92,000	94,000	325,000	--	--	--
Manganese	250	320	630	636	--	--
Nickel	8.4	7.2	100	--	--	--
Potassium	680	560	--	--	--	--
Selenium	ND U	0.4 J	1.3	--	--	--
Sodium	780	1,200	--	--	--	--
Vanadium	9.6	9.2	550	--	--	--
Zinc	41	44	5,100	--	--	--
TCLP Metals (mg/L)						
Barium	0.35 J	0.17 J	--	--	--	2
Boron	0.45 J	0.81	--	--	--	2
Manganese	0.67 L	0.75 L	--	--	--	0.15
Zinc	1.7	ND U	--	--	--	5
SPLP Metals (mg/L)						
Manganese	0.084	0.05	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-67 (Vacant Land)	Comparison Criteria			
		MACs			TACO
BORING	3011-67-B04				
SAMPLE	3011-67-B04 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.89	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthylene	0.0063 J	--	--	--	--
Anthracene	0.013 J	12,000	--	--	--
Benzo[a]anthracene	0.035 J	0.9	1.8	1.1	--
Benzo[a]pyrene	0.048	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.13	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.025 J	--	--	--	--
Benzo[k]fluoranthene	0.043	9	--	--	--
Chrysene	0.066	88	--	--	--
Fluoranthene	0.089	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.029 J	0.9	1.6	0.9	--
Phenanthrene	0.04	--	--	--	--
Pyrene	0.11	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	2.4	11.3	13	--	--
Barium	18	1,500	--	--	--
Beryllium	0.23	22	--	--	--
Boron	7.8	40	--	--	--
Cadmium	0.089	5.2	--	--	--
Calcium	170,000	--	--	--	--
Chromium	7.6	21	--	--	--
Cobalt	2.6	20	--	--	--
Copper	9.9	2,900	--	--	--
Iron	6,800	15,000	15,900	--	--
Lead	35	107	--	--	--
Magnesium	100,000	325,000	--	--	--
Manganese	300	630	636	--	--
Mercury	0.02	0.89	--	--	--
Nickel	10	100	--	--	--
Potassium	520	--	--	--	--
Selenium	ND U	1.3	--	--	--
Silver	0.094 J	4.4	--	--	--
Sodium	700	--	--	--	--
Vanadium	9.7	550	--	--	--
Zinc	35	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.38 J	--	--	--	2
Boron	0.54	--	--	--	2
Iron	ND U	--	--	--	5
Manganese	0.34 L	--	--	--	0.15
Zinc	0.58	--	--	--	5
SPLP Metals (mg/L)					
Manganese	1.4 L	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-71 (5 Residences)	Comparison Criteria			
		MACs			TACO
BORING	3011-71-B01				
SAMPLE	3011-71-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.79	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	0.0075 J	570	--	--	--
Anthracene	0.024 J	12,000	--	--	--
Benzo[a]anthracene	0.091	0.9	1.8	1.1	--
Benzo[a]pyrene	0.1 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.17	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.085	--	--	--	--
Benzo[k]fluoranthene	0.071	9	--	--	--
Chrysene	0.11	88	--	--	--
Dibenzo(a,h)anthracene	0.02 J	0.09	0.42	0.2	--
Fluoranthene	0.17	3,100	--	--	--
Fluorene	0.0076 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.088	0.9	1.6	0.9	--
Phenanthrene	0.14	--	--	--	--
Pyrene	0.35	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	0.21 J	5	--	--	--
Arsenic	2.1	11.3	13	--	--
Barium	21	1,500	--	--	--
Beryllium	0.2	22	--	--	--
Boron	10	40	--	--	--
Cadmium	0.09	5.2	--	--	--
Calcium	170,000	--	--	--	--
Chromium	5	21	--	--	--
Cobalt	2.4	20	--	--	--
Copper	7.8	2,900	--	--	--
Iron	7,000	15,000	15,900	--	--
Lead	12	107	--	--	--
Magnesium	100,000	325,000	--	--	--
Manganese	260	630	636	--	--
Mercury	0.01 J	0.89	--	--	--
Nickel	5.8	100	--	--	--
Potassium	490	--	--	--	--
Selenium	0.3 J	1.3	--	--	--
Sodium	470	--	--	--	--
Vanadium	7.3	550	--	--	--
Zinc	20	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.44 J	--	--	--	2
Boron	0.79	--	--	--	2
Manganese	0.48 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.066	--	--	--	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: 500-107557-8
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/26/2016 4:31:35 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for
Richard Wright, Senior Project Manager
(708)534-5200
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Job ID: 500-107557-8

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107557-8

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for batch 500-323591 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323591 recovered outside control limits for the following analytes: Chloroethane, 2-Butanone, and Vinyl Acetate.

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: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCS associated with batch 323296 had 1 analyte outside control limits: 2,4-Dinitrophenol. These results have been reported and qualified. 3011-67-B04 (0-1) (500-107557-24), 3011-67-B03 (0-1) (500-107557-25), 3011-67-B02 (0-1) (500-107557-26) and 3011-67-B01 (0-1) (500-107557-27)

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-67-B03 (0-1) (500-107557-25). The laboratory's SOP allows one acid and/or one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Client Sample ID: 3011-67-B04 (0-1)

Lab Sample ID: 500-107557-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0063	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.040		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.089		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.11		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.035	J	0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.066		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.043		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.048		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.029	J	0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.025	J	0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.4		0.44	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	18		0.44	0.081	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.23		0.18	0.038	mg/Kg	1	☼	6010B	Total/NA
Boron	7.8		2.2	0.31	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.089		0.088	0.026	mg/Kg	1	☼	6010B	Total/NA
Calcium	170000		88	28	mg/Kg	10	☼	6010B	Total/NA
Chromium	7.6		0.44	0.076	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.6		0.22	0.050	mg/Kg	1	☼	6010B	Total/NA
Copper	9.9		0.44	0.096	mg/Kg	1	☼	6010B	Total/NA
Iron	6800		8.8	3.4	mg/Kg	1	☼	6010B	Total/NA
Lead	35		0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	100000		44	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.44	0.087	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.44	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		22	3.6	mg/Kg	1	☼	6010B	Total/NA
Silver	0.094	J	0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Sodium	700		44	5.8	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.7		0.22	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	35		0.88	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.54		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.34		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.58		0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.4		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.020		0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.89		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107557-24	3011-67-B04 (0-1)	Solid	02/12/16 09:30	02/13/16 08:00

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Client Sample ID: 3011-67-B04 (0-1)

Lab Sample ID: 500-107557-24

Date Collected: 02/12/16 09:30

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Bromodichloromethane	<0.0048		0.0048	0.00082	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Bromoform	<0.0048		0.0048	0.00099	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
2-Butanone (MEK)	<0.0048 *		0.0048	0.0017	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Chloroethane	<0.0048 *		0.0048	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Chloroform	<0.0048		0.0048	0.00094	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Chloromethane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Dibromochloromethane	<0.0048		0.0048	0.00056	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,1-Dichloroethane	<0.0048		0.0048	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,2-Dichloroethane	<0.0048		0.0048	0.00072	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,1-Dichloroethene	<0.0048		0.0048	0.0018	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,3-Dichloropropane, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Methylene Chloride	<0.0048		0.0048	0.0037	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00077	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00094	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Vinyl acetate	<0.0048 *		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Vinyl chloride	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1
Xylenes, Total	<0.0097		0.0097	0.0018	mg/Kg	☼	02/13/16 09:15	02/20/16 03:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 122	02/13/16 09:15	02/20/16 03:34	1
Dibromofluoromethane	87		75 - 120	02/13/16 09:15	02/20/16 03:34	1
1,2-Dichloroethane-d4 (Surr)	74		70 - 134	02/13/16 09:15	02/20/16 03:34	1
Toluene-d8 (Surr)	107		75 - 122	02/13/16 09:15	02/20/16 03:34	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	☼	02/17/16 18:05	02/25/16 20:34	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Client Sample ID: 3011-67-B04 (0-1)

Lab Sample ID: 500-107557-24

Date Collected: 02/12/16 09:30

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.3

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	☼	02/17/16 18:05	02/25/16 20:34	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.046	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,4-Dinitrophenol	<0.77	*	0.77	0.67	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Acenaphthylene	0.0063	J	0.038	0.0050	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Fluorene	<0.038		0.038	0.0053	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Phenanthrene	0.040		0.038	0.0053	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Anthracene	0.013	J	0.038	0.0063	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Fluoranthene	0.089		0.038	0.0070	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Pyrene	0.11		0.038	0.0075	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Benzo[a]anthracene	0.035	J	0.038	0.0051	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Client Sample ID: 3011-67-B04 (0-1)

Lab Sample ID: 500-107557-24

Date Collected: 02/12/16 09:30

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.066		0.038	0.010	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Benzo[b]fluoranthene	0.13		0.038	0.0082	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Benzo[k]fluoranthene	0.043		0.038	0.011	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Benzo[a]pyrene	0.048		0.038	0.0073	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Indeno[1,2,3-cd]pyrene	0.029	J	0.038	0.0098	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0073	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
Benzo[g,h,i]perylene	0.025	J	0.038	0.012	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/17/16 18:05	02/25/16 20:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		25 - 110	02/17/16 18:05	02/25/16 20:34	1
Phenol-d5	76		31 - 110	02/17/16 18:05	02/25/16 20:34	1
Nitrobenzene-d5	61		25 - 115	02/17/16 18:05	02/25/16 20:34	1
2-Fluorobiphenyl	65		25 - 119	02/17/16 18:05	02/25/16 20:34	1
2,4,6-Tribromophenol	49		35 - 137	02/17/16 18:05	02/25/16 20:34	1
Terphenyl-d14	104		36 - 134	02/17/16 18:05	02/25/16 20:34	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.88		0.88	0.18	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Arsenic	2.4		0.44	0.20	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Barium	18		0.44	0.081	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Beryllium	0.23		0.18	0.038	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Boron	7.8		2.2	0.31	mg/Kg	☼	02/19/16 09:15	02/24/16 17:29	1
Cadmium	0.089		0.088	0.026	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Calcium	170000		88	28	mg/Kg	☼	02/19/16 09:15	02/24/16 18:57	10
Chromium	7.6		0.44	0.076	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Cobalt	2.6		0.22	0.050	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Copper	9.9		0.44	0.096	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Iron	6800		8.8	3.4	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Lead	35		0.22	0.11	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Magnesium	100000		44	18	mg/Kg	☼	02/19/16 09:15	02/24/16 18:57	10
Manganese	300		0.44	0.087	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Nickel	10		0.44	0.12	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Potassium	520		22	3.6	mg/Kg	☼	02/19/16 09:15	02/24/16 17:29	1
Selenium	<0.44		0.44	0.22	mg/Kg	☼	02/19/16 09:15	02/24/16 17:29	1
Silver	0.094	J	0.22	0.052	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Sodium	700		44	5.8	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Thallium	<0.44		0.44	0.22	mg/Kg	☼	02/19/16 09:15	02/24/16 17:29	1
Vanadium	9.7		0.22	0.064	mg/Kg	☼	02/19/16 09:15	02/24/16 00:37	1
Zinc	35		0.88	0.28	mg/Kg	☼	02/19/16 09:15	02/25/16 13:49	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.38	J	0.50	0.050	mg/L		02/19/16 16:57	02/20/16 19:02	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/19/16 16:57	02/20/16 19:02	1
Boron	0.54		0.50	0.050	mg/L		02/19/16 16:57	02/20/16 19:02	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Client Sample ID: 3011-67-B04 (0-1)

Lab Sample ID: 500-107557-24

Date Collected: 02/12/16 09:30

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.3

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		02/19/16 16:57	02/20/16 19:02	1
Chromium	<0.025		0.025	0.010	mg/L		02/19/16 16:57	02/20/16 19:02	1
Cobalt	<0.025		0.025	0.010	mg/L		02/19/16 16:57	02/20/16 19:02	1
Iron	<0.40	^	0.40	0.20	mg/L		02/19/16 16:57	02/20/16 19:02	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/19/16 16:57	02/20/16 19:02	1
Manganese	0.34		0.025	0.010	mg/L		02/19/16 16:57	02/20/16 19:02	1
Nickel	<0.025		0.025	0.010	mg/L		02/19/16 16:57	02/20/16 19:02	1
Selenium	<0.050		0.050	0.020	mg/L		02/19/16 16:57	02/20/16 19:02	1
Silver	<0.025		0.025	0.010	mg/L		02/19/16 16:57	02/20/16 19:02	1
Zinc	0.58		0.50	0.020	mg/L		02/19/16 16:57	02/20/16 19:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.4		0.025	0.010	mg/L		02/20/16 10:56	02/22/16 21:52	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		02/19/16 16:57	02/22/16 13:20	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/19/16 16:57	02/22/16 13:20	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		02/20/16 12:00	02/22/16 09:39	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020		0.017	0.0087	mg/Kg	☼	02/18/16 16:00	02/19/16 11:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.89		0.200	0.200	SU			02/17/16 15:08	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi 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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107557-8

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107557
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments				
EE		1009341-0008-01												
Project Name		Lab Project #		Date		Time		# of Containers		Matrix				
LC38		50011864												
Project Location/State		Lab PM		Date		Time		# of Containers		Matrix				
Kane County, IL		D. Wright												
Sampler		Lab PM		Date		Time		# of Containers		Matrix				
S. Cooper		D. Wright												
Lab ID	M/S/MSD	Sample ID	Date	Time	# of Containers	Matrix	Voc	SVOC	Total TA	Metals	TCDF/STP	TCM/WHI	Pb/g Solid	Comments
24		3011-67-B04(01)	2-12-16	0930	2	S	X	X	X	X	X	X	X	
25		3011-67-B03(01)	2-12-16	0940	2	S	X	X	X	X	X	X	X	
26		3011-67-B02(01)	2-12-16	0945	2	S	X	X	X	X	X	X	X	
27		3011-61-B01(01)	2-12-16	0950	2	S	X	X	X	X	X	X	X	

- Preservative Key
- HCL, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - NaHSO4
 - Cool to 4°
 - None
 - Other

Turnaround Time Required (Business Days)
 ___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days 10 Days ___ 15 Days ___ Other
 Requested Due Date _____

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

Relinquished By: <u>[Signature]</u> Company: <u>KA</u> Date: <u>2/12/16</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/12/16</u> Time: <u>1605</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/12/16</u> Time: <u>1815</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/13/16</u> Time: <u>0800</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: 500-107557-8

Login Number: 107557

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
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	SEE NCM
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107558-1
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:18:16 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Job ID: 500-107558-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-1

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323512: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

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 samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-68-B01 (0-1) (500-107558-4), 3011-68-B02 (0-1) (500-107558-5), 3011-68-B03 (0-1) (500-107558-6), 3011-68-B05 (0-1) (500-107558-7), 3011-68-B05 (0-1)D (500-107558-8), 3011-68-B08 (0-1) (500-107558-9), (500-107558-E-1-B MS) and (500-107558-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6020A: The continuing calibration verifications (CCVs) associated with batch 500-323650, qt lines 24, 36, 49 and 55, recovered above the upper control limit for Thallium. The samples associated with these CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 500-107558-1 through 24.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

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Client Sample ID: 3011-68-B01 (0-1)

Lab Sample ID: 500-107558-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Phenanthrene	0.11		0.036	0.0051	mg/Kg	1	*		8270D	Total/NA
Anthracene	0.017	J	0.036	0.0061	mg/Kg	1	*		8270D	Total/NA
Fluoranthene	0.30		0.036	0.0068	mg/Kg	1	*		8270D	Total/NA
Pyrene	0.35		0.036	0.0073	mg/Kg	1	*		8270D	Total/NA
Benzo[a]anthracene	0.11		0.036	0.0049	mg/Kg	1	*		8270D	Total/NA
Chrysene	0.17		0.036	0.010	mg/Kg	1	*		8270D	Total/NA
Benzo[b]fluoranthene	0.36		0.036	0.0079	mg/Kg	1	*		8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.036	0.011	mg/Kg	1	*		8270D	Total/NA
Benzo[a]pyrene	0.16		0.036	0.0071	mg/Kg	1	*		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.097		0.036	0.0095	mg/Kg	1	*		8270D	Total/NA
Dibenz(a,h)anthracene	0.023	J	0.036	0.0071	mg/Kg	1	*		8270D	Total/NA
Benzo[g,h,i]perylene	0.099		0.036	0.012	mg/Kg	1	*		8270D	Total/NA
Antimony	0.35	J	1.1	0.23	mg/Kg	1	*		6010B	Total/NA
Arsenic	3.1		0.55	0.26	mg/Kg	1	*		6010B	Total/NA
Barium	16		0.55	0.10	mg/Kg	1	*		6010B	Total/NA
Beryllium	0.17	J	0.22	0.048	mg/Kg	1	*		6010B	Total/NA
Boron	7.9		2.8	0.39	mg/Kg	1	*		6010B	Total/NA
Cadmium	0.23		0.11	0.032	mg/Kg	1	*		6010B	Total/NA
Calcium	150000	B	110	36	mg/Kg	10	*		6010B	Total/NA
Chromium	9.6	B	0.55	0.095	mg/Kg	1	*		6010B	Total/NA
Cobalt	3.6		0.28	0.063	mg/Kg	1	*		6010B	Total/NA
Copper	13		0.55	0.12	mg/Kg	1	*		6010B	Total/NA
Iron	6800		11	4.3	mg/Kg	1	*		6010B	Total/NA
Lead	58		0.28	0.14	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B01 (0-1) (Continued)

Lab Sample ID: 500-107558-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	92000	B	55	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	250		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.4		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	680		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	780		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.6		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	41		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.67		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	1.7	B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.084		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.93		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

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Client Sample ID: 3011-68-B08 (0-1)

Lab Sample ID: 500-107558-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Phenanthrene	0.094		0.037	0.0052	mg/Kg	1	☼		8270D	Total/NA
Anthracene	0.017	J	0.037	0.0062	mg/Kg	1	☼		8270D	Total/NA
Fluoranthene	0.20		0.037	0.0069	mg/Kg	1	☼		8270D	Total/NA
Pyrene	0.40		0.037	0.0074	mg/Kg	1	☼		8270D	Total/NA
Benzo[a]anthracene	0.11		0.037	0.0050	mg/Kg	1	☼		8270D	Total/NA
Chrysene	0.17		0.037	0.010	mg/Kg	1	☼		8270D	Total/NA
Benzo[b]fluoranthene	0.29		0.037	0.0080	mg/Kg	1	☼		8270D	Total/NA
Benzo[k]fluoranthene	0.14		0.037	0.011	mg/Kg	1	☼		8270D	Total/NA
Benzo[a]pyrene	0.17		0.037	0.0072	mg/Kg	1	☼		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.037	0.0096	mg/Kg	1	☼		8270D	Total/NA
Benzo[g,h,i]perylene	0.16		0.037	0.012	mg/Kg	1	☼		8270D	Total/NA
Antimony	0.31	J	1.1	0.23	mg/Kg	1	☼		6010B	Total/NA
Arsenic	1.9		0.55	0.25	mg/Kg	1	☼		6010B	Total/NA
Barium	14		0.55	0.10	mg/Kg	1	☼		6010B	Total/NA
Beryllium	0.18	J	0.22	0.048	mg/Kg	1	☼		6010B	Total/NA
Boron	10		2.8	0.39	mg/Kg	1	☼		6010B	Total/NA
Cadmium	0.16		0.11	0.032	mg/Kg	1	☼		6010B	Total/NA
Calcium	160000	B	110	36	mg/Kg	10	☼		6010B	Total/NA
Chromium	11	B	0.55	0.095	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B08 (0-1) (Continued)

Lab Sample ID: 500-107558-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	2.9		0.28	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7500		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	40		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	94000	B	55	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	320		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.2		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	560		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.40	J	0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Sodium	1200		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.2		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.17	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.81		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.75		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.22	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.050		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.62		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-4	3011-68-B01 (0-1)	Solid	02/12/16 13:35	02/13/16 08:00
500-107558-9	3011-68-B08 (0-1)	Solid	02/12/16 14:50	02/13/16 08:00

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B01 (0-1)

Lab Sample ID: 500-107558-4

Date Collected: 02/12/16 13:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0033	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Benzene	<0.0043		0.0043	0.00095	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Bromodichloromethane	<0.0043		0.0043	0.00072	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Bromoform	<0.0043		0.0043	0.00087	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Bromomethane	<0.0043	*	0.0043	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
2-Butanone (MEK)	<0.0043		0.0043	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Carbon disulfide	<0.0043		0.0043	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Carbon tetrachloride	<0.0043		0.0043	0.00092	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Chlorobenzene	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Chloroethane	<0.0043		0.0043	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Chloroform	<0.0043		0.0043	0.00084	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Chloromethane	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
cis-1,2-Dichloroethene	<0.0043		0.0043	0.00087	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
cis-1,3-Dichloropropene	<0.0043		0.0043	0.00098	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Dibromochloromethane	<0.0043		0.0043	0.00049	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,1-Dichloroethane	<0.0043		0.0043	0.00088	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,2-Dichloroethane	<0.0043		0.0043	0.00063	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,1-Dichloroethene	<0.0043		0.0043	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,2-Dichloropropane	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,3-Dichloropropane, Total	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Ethylbenzene	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Methylene Chloride	<0.0043		0.0043	0.0032	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.00088	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Methyl tert-butyl ether	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Styrene	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,1,2,2-Tetrachloroethane	<0.0043		0.0043	0.00068	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Tetrachloroethene	<0.0043		0.0043	0.00089	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Toluene	<0.0043		0.0043	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
trans-1,2-Dichloroethene	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
trans-1,3-Dichloropropene	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,1,1-Trichloroethane	<0.0043		0.0043	0.00099	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
1,1,2-Trichloroethane	<0.0043		0.0043	0.00083	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Trichloroethene	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Vinyl acetate	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Vinyl chloride	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1
Xylenes, Total	<0.0086		0.0086	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 17:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 122	02/13/16 09:15	02/19/16 17:31	1
Dibromofluoromethane	101		75 - 120	02/13/16 09:15	02/19/16 17:31	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 134	02/13/16 09:15	02/19/16 17:31	1
Toluene-d8 (Surr)	109		75 - 122	02/13/16 09:15	02/19/16 17:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B01 (0-1)

Lab Sample ID: 500-107558-4

Date Collected: 02/12/16 13:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.0

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	0.044	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Phenanthrene	0.11		0.036	0.0051	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Anthracene	0.017 J		0.036	0.0061	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Fluoranthene	0.30		0.036	0.0068	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Pyrene	0.35		0.036	0.0073	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Benzo[a]anthracene	0.11		0.036	0.0049	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B01 (0-1)

Lab Sample ID: 500-107558-4

Date Collected: 02/12/16 13:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.17		0.036	0.010	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Benzo[b]fluoranthene	0.36		0.036	0.0079	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Benzo[k]fluoranthene	0.12		0.036	0.011	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Benzo[a]pyrene	0.16		0.036	0.0071	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Indeno[1,2,3-cd]pyrene	0.097		0.036	0.0095	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Dibenz(a,h)anthracene	0.023	J	0.036	0.0071	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
Benzo[g,h,i]perylene	0.099		0.036	0.012	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 07:07	02/24/16 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	78		25 - 110	02/18/16 07:07	02/24/16 22:36	1
Phenol-d5	74		31 - 110	02/18/16 07:07	02/24/16 22:36	1
Nitrobenzene-d5	72		25 - 115	02/18/16 07:07	02/24/16 22:36	1
2-Fluorobiphenyl	77		25 - 119	02/18/16 07:07	02/24/16 22:36	1
2,4,6-Tribromophenol	95		35 - 137	02/18/16 07:07	02/24/16 22:36	1
Terphenyl-d14	145	X	36 - 134	02/18/16 07:07	02/24/16 22:36	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.35	J	1.1	0.23	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Arsenic	3.1		0.55	0.26	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Barium	16		0.55	0.10	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Beryllium	0.17	J	0.22	0.048	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Boron	7.9		2.8	0.39	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Cadmium	0.23		0.11	0.032	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Calcium	150000	B	110	36	mg/Kg	☼	02/25/16 08:58	02/26/16 12:49	10
Chromium	9.6	B	0.55	0.095	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Cobalt	3.6		0.28	0.063	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Copper	13		0.55	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Iron	6800		11	4.3	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Lead	58		0.28	0.14	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Magnesium	92000	B	55	23	mg/Kg	☼	02/25/16 08:58	02/26/16 12:49	10
Manganese	250		0.55	0.11	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Nickel	8.4		0.55	0.15	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Potassium	680		28	4.5	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Sodium	780		55	7.3	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Vanadium	9.6		0.28	0.081	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1
Zinc	41		1.1	0.35	mg/Kg	☼	02/25/16 08:58	02/25/16 18:30	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.35	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 11:37	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 11:37	1
Boron	0.45	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 11:37	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B01 (0-1)

Lab Sample ID: 500-107558-4

Date Collected: 02/12/16 13:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 87.0

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	-	02/18/16 16:22	02/20/16 11:37	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Iron	<0.40		0.40	0.20	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Manganese	0.67		0.025	0.010	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Silver	<0.025		0.025	0.010	mg/L	-	02/18/16 16:22	02/20/16 11:37	1
Zinc	1.7	B	0.50	0.020	mg/L	-	02/18/16 16:22	02/20/16 11:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.084		0.025	0.010	mg/L	-	02/20/16 10:58	02/23/16 06:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L	-	02/18/16 16:22	02/19/16 13:10	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/18/16 16:22	02/19/16 13:10	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/18/16 16:45	02/19/16 15:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0093	mg/Kg	☼	02/18/16 16:00	02/19/16 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.93		0.200	0.200	SU	-		02/18/16 22:09	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B08 (0-1)

Lab Sample ID: 500-107558-9

Date Collected: 02/12/16 14:50

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0033	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Benzene	<0.0043		0.0043	0.00096	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Bromodichloromethane	<0.0043		0.0043	0.00073	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Bromoform	<0.0043		0.0043	0.00088	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Bromomethane	<0.0043	*	0.0043	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
2-Butanone (MEK)	<0.0043		0.0043	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Carbon disulfide	<0.0043		0.0043	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Carbon tetrachloride	<0.0043		0.0043	0.00092	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Chlorobenzene	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Chloroethane	<0.0043		0.0043	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Chloroform	<0.0043		0.0043	0.00084	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Chloromethane	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
cis-1,2-Dichloroethene	<0.0043		0.0043	0.00088	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
cis-1,3-Dichloropropene	<0.0043		0.0043	0.00098	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Dibromochloromethane	<0.0043		0.0043	0.00050	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,1-Dichloroethane	<0.0043		0.0043	0.00089	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,2-Dichloroethane	<0.0043		0.0043	0.00064	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,1-Dichloroethene	<0.0043		0.0043	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,2-Dichloropropane	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,3-Dichloropropane, Total	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Ethylbenzene	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Methylene Chloride	<0.0043		0.0043	0.0033	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.00089	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Methyl tert-butyl ether	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Styrene	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,1,2,2-Tetrachloroethane	<0.0043		0.0043	0.00069	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Tetrachloroethene	<0.0043		0.0043	0.00090	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Toluene	<0.0043		0.0043	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
trans-1,2-Dichloroethene	<0.0043		0.0043	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
trans-1,3-Dichloropropene	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,1,1-Trichloroethane	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
1,1,2-Trichloroethane	<0.0043		0.0043	0.00084	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Trichloroethene	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Vinyl acetate	<0.0043		0.0043	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Vinyl chloride	<0.0043		0.0043	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1
Xylenes, Total	<0.0086		0.0086	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 19:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 122	02/13/16 09:15	02/19/16 19:36	1
Dibromofluoromethane	107		75 - 120	02/13/16 09:15	02/19/16 19:36	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	02/13/16 09:15	02/19/16 19:36	1
Toluene-d8 (Surr)	109		75 - 122	02/13/16 09:15	02/19/16 19:36	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	☼	02/18/16 07:07	02/25/16 00:59	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B08 (0-1)

Lab Sample ID: 500-107558-9

Date Collected: 02/12/16 14:50

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.9

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	0.044	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Phenanthrene	0.094		0.037	0.0052	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Anthracene	0.017 J		0.037	0.0062	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Fluoranthene	0.20		0.037	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Pyrene	0.40		0.037	0.0074	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Benzo[a]anthracene	0.11		0.037	0.0050	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B08 (0-1)

Lab Sample ID: 500-107558-9

Date Collected: 02/12/16 14:50

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.17		0.037	0.010	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Benzo[b]fluoranthene	0.29		0.037	0.0080	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Benzo[k]fluoranthene	0.14		0.037	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Benzo[a]pyrene	0.17		0.037	0.0072	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Indeno[1,2,3-cd]pyrene	0.13		0.037	0.0096	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
Benzo[g,h,i]perylene	0.16		0.037	0.012	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/18/16 07:07	02/25/16 00:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	71		25 - 110	02/18/16 07:07	02/25/16 00:59	1
Phenol-d5	72		31 - 110	02/18/16 07:07	02/25/16 00:59	1
Nitrobenzene-d5	67		25 - 115	02/18/16 07:07	02/25/16 00:59	1
2-Fluorobiphenyl	72		25 - 119	02/18/16 07:07	02/25/16 00:59	1
2,4,6-Tribromophenol	94		35 - 137	02/18/16 07:07	02/25/16 00:59	1
Terphenyl-d14	196 X		36 - 134	02/18/16 07:07	02/25/16 00:59	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.31	J	1.1	0.23	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Arsenic	1.9		0.55	0.25	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Barium	14		0.55	0.10	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Beryllium	0.18	J	0.22	0.048	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Boron	10		2.8	0.39	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Cadmium	0.16		0.11	0.032	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Calcium	160000	B	110	36	mg/Kg	☼	02/25/16 08:58	02/26/16 13:19	10
Chromium	11	B	0.55	0.095	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Cobalt	2.9		0.28	0.062	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Copper	13		0.55	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Iron	7500		11	4.3	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Lead	40		0.28	0.14	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Magnesium	94000	B	55	22	mg/Kg	☼	02/25/16 08:58	02/26/16 13:19	10
Manganese	320		0.55	0.11	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Nickel	7.2		0.55	0.15	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Potassium	560		28	4.5	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Selenium	0.40	J	0.55	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Sodium	1200		55	7.3	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Vanadium	9.2		0.28	0.081	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1
Zinc	44		1.1	0.35	mg/Kg	☼	02/25/16 08:58	02/25/16 19:04	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.17	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 12:18	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 12:18	1
Boron	0.81		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 12:18	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Client Sample ID: 3011-68-B08 (0-1)

Lab Sample ID: 500-107558-9

Date Collected: 02/12/16 14:50

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.9

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		02/18/16 16:22	02/20/16 12:18	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:18	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:18	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 12:18	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 12:18	1
Manganese	0.75		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:18	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:18	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 12:18	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:18	1
Zinc	0.22	J B	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 12:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.050		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 06:43	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		02/18/16 16:22	02/19/16 13:38	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 13:38	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:23	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0092	mg/Kg	☼	02/18/16 16:00	02/19/16 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.62		0.200	0.200	SU			02/18/16 22:41	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
E	Result exceeded calibration range.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-1

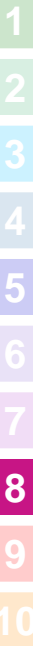
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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: 500-107558 COC
Fax: _____
PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-107538
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Voc	Svoc	TOH TAC	TCAP/SPC	PTV% Solid
1		3011-68-B07(0-1)	2/2/16	0910	2 S		X	X	X	X	X
2		3011-68-B06(0-1)	2/2/16	0920	2 S		X	X	X	X	X
3		3011-68-B04(0-1)	2/2/16	0925	2 S		X	X	X	X	X
4		3011-68-B01(0-1)	2/2/16	1235	2 S		X	X	X	X	X
5		3011-68-B02(0-1)	2/2/16	1340	2 S		X	X	X	X	X
6		3011-68-B03(0-1)	2/2/16	1350	2 S		X	X	X	X	X
7		3011-68-B05(0-1)	2/2/16	1400	2 S		X	X	X	X	X
8		3011-68-B05(0-1)	2/2/16	1400	2 S		X	X	X	X	X
9		3011-68-B06(0-1)	2/2/16	1450	2 S		X	X	X	X	X
10			2/2/16								

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

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

Requested Due Date: _____

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

Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/2/16</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/12/16</u> Time: <u>1605</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/12/16</u> Time: <u>1815</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/13/16</u> Time: <u>0800</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: 500-107558-1

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107558-3
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:19:30 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
TotalAccess

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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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Receipt Checklists	13

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Job ID: 500-107558-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-3

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

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 samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-71-B01 (0-1) (500-107558-14), (500-107558-E-1-B MS) and (500-107558-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

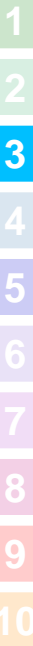
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0075	J	0.035	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0076	J	0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.024	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.17		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.35		0.035	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.091		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.11		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.17		0.035	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.071		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.088		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.020	J	0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.085		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.21	J	0.87	0.18	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.1		0.43	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	21		0.43	0.079	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.20		0.17	0.038	mg/Kg	1	☼	6010B	Total/NA
Boron	10		2.2	0.30	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.090		0.087	0.025	mg/Kg	1	☼	6010B	Total/NA
Calcium	170000	B	87	28	mg/Kg	10	☼	6010B	Total/NA
Chromium	5.0	B	0.43	0.074	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.4		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Copper	7.8		0.43	0.094	mg/Kg	1	☼	6010B	Total/NA
Iron	7000		8.7	3.3	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	100000	B	43	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	260		0.43	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	5.8		0.43	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	490		22	3.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.30	J	0.43	0.21	mg/Kg	1	☼	6010B	Total/NA
Sodium	470		43	5.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	7.3		0.22	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	20		0.87	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.79		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.48		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.066		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.010	J	0.018	0.0093	mg/Kg	1	☼	7471B	Total/NA
pH	8.79		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-14	3011-71-B01 (0-1)	Solid	02/12/16 09:05	02/13/16 08:00

1

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Benzene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Bromodichloromethane	<0.0051		0.0051	0.00085	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Bromoform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Bromomethane	<0.0051	*	0.0051	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
2-Butanone (MEK)	<0.0051		0.0051	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Carbon disulfide	<0.0051		0.0051	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Carbon tetrachloride	<0.0051		0.0051	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chlorobenzene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chloroethane	<0.0051	*	0.0051	0.0021	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chloroform	<0.0051		0.0051	0.00099	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chloromethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
cis-1,2-Dichloroethene	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
cis-1,3-Dichloropropene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Dibromochloromethane	<0.0051		0.0051	0.00058	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1-Dichloroethane	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,2-Dichloroethane	<0.0051		0.0051	0.00075	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1-Dichloroethene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,2-Dichloropropane	<0.0051		0.0051	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,3-Dichloropropane, Total	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Ethylbenzene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Methylene Chloride	<0.0051		0.0051	0.0038	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Methyl tert-butyl ether	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Styrene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1,2,2-Tetrachloroethane	<0.0051		0.0051	0.00080	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Tetrachloroethene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Toluene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
trans-1,2-Dichloroethene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
trans-1,3-Dichloropropene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1,1-Trichloroethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1,2-Trichloroethane	<0.0051		0.0051	0.00098	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Trichloroethene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Vinyl acetate	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Vinyl chloride	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/13/16 09:15	02/19/16 23:44	1
Dibromofluoromethane	105		75 - 120	02/13/16 09:15	02/19/16 23:44	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	02/13/16 09:15	02/19/16 23:44	1
Toluene-d8 (Surr)	108		75 - 122	02/13/16 09:15	02/19/16 23:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.079	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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	☼	02/18/16 07:07	02/25/16 03:20	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dimethylphenol	<0.35		0.35	0.14	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Naphthalene	<0.035		0.035	0.0055	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dichlorophenol	<0.35		0.35	0.085	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachlorocyclopentadiene	<0.72		0.72	0.20	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Acenaphthene	0.0075	J	0.035	0.0064	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Fluorene	0.0076	J	0.035	0.0050	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Phenanthrene	0.14		0.035	0.0050	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Anthracene	0.024	J	0.035	0.0059	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Fluoranthene	0.17		0.035	0.0066	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Pyrene	0.35		0.035	0.0071	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[a]anthracene	0.091		0.035	0.0048	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.11		0.035	0.0097	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[b]fluoranthene	0.17		0.035	0.0077	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[k]fluoranthene	0.071		0.035	0.010	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[a]pyrene	0.10		0.035	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Indeno[1,2,3-cd]pyrene	0.088		0.035	0.0092	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Dibenz(a,h)anthracene	0.020	J	0.035	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[g,h,i]perylene	0.085		0.035	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	74		25 - 110	02/18/16 07:07	02/25/16 03:20	1
Phenol-d5	74		31 - 110	02/18/16 07:07	02/25/16 03:20	1
Nitrobenzene-d5	71		25 - 115	02/18/16 07:07	02/25/16 03:20	1
2-Fluorobiphenyl	78		25 - 119	02/18/16 07:07	02/25/16 03:20	1
2,4,6-Tribromophenol	57		35 - 137	02/18/16 07:07	02/25/16 03:20	1
Terphenyl-d14	203	X	36 - 134	02/18/16 07:07	02/25/16 03:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.21	J	0.87	0.18	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Arsenic	2.1		0.43	0.20	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Barium	21		0.43	0.079	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Beryllium	0.20		0.17	0.038	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Boron	10		2.2	0.30	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Cadmium	0.090		0.087	0.025	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Calcium	170000	B	87	28	mg/Kg	☼	02/25/16 08:58	02/26/16 13:39	10
Chromium	5.0	B	0.43	0.074	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Cobalt	2.4		0.22	0.049	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Copper	7.8		0.43	0.094	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Iron	7000		8.7	3.3	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Lead	12		0.22	0.11	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Magnesium	100000	B	43	18	mg/Kg	☼	02/25/16 08:58	02/26/16 13:39	10
Manganese	260		0.43	0.086	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Nickel	5.8		0.43	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Potassium	490		22	3.5	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Selenium	0.30	J	0.43	0.21	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Silver	<0.22		0.22	0.051	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Sodium	470		43	5.7	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Thallium	<0.43		0.43	0.21	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Vanadium	7.3		0.22	0.063	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Zinc	20		0.87	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.44	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:08	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 13:08	1
Boron	0.79		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:08	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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		02/18/16 16:22	02/20/16 13:08	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 13:08	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 13:08	1
Manganese	0.48		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 13:08	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Zinc	0.25	J B	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 13:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.066		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 07:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 16:22	02/19/16 13:59	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 13:59	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	J	0.018	0.0093	mg/Kg	☼	02/18/16 16:00	02/19/16 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.79		0.200	0.200	SU			02/18/16 23:12	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

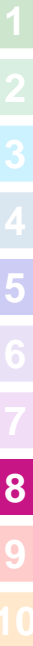
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107558
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #								
Project Location/State		Lab PM								
Sampler										
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix				
			Date	Time					Comments	
415		3011-71-BUI	2/2/16	0905	2	S	Voc	SVCC	Total TAC Methyl Trippyl Methyl P4/16 S1d	X X X X X
2/2/16										

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>EE</u> Date: <u>2/2/16</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TR</u> Date: <u>2/2/16</u> Time: <u>1605</u>
Relinquished By: <u>[Signature]</u> Company: <u>TR</u> Date: <u>2/2/16</u> Time: <u>1815</u>	Received By: <u>[Signature]</u> Company: <u>TR</u> Date: <u>2/2/16</u> Time: <u>0800</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: 500-107558-3

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
42W 075 IL 38 ISGS #3011-70 (Shady Hill Gardens)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.906232 Longitude: -88.435286
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.906232 Longitude: -88.435286

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)]:

Locations 3011-70-B01, B02 and B04 were sampled within the construction zone adjacent to ISGS #3011-70 (Shady Hill Gardens). Refer to PSI Report for ISGS #3011-70 (Shady Hill Gardens) including Table 4-4, and Figures 4-10A&B.

- 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 J107558-2.

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:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-70 (Shady Hill Gardens)			Comparison Criteria			
	3011-70-B01	3011-70-B02	3011-70-B04	MACs			TACO
BORING	3011-70-B01 (0-1)	3011-70-B02 (0-1)	3011-70-B04 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
SAMPLE	Soil	Soil	Soil				
MATRIX	0-1	0-1	0-1				
DEPTH (feet)	8.82	8.8	7.82				
pH							
VOCs (None Detected)							
SVOCs (mg/kg)							
2-Methylnaphthalene	0.018 J	ND U	ND U	--	--	--	--
Anthracene	ND U	0.018 J	0.011 J	12,000	--	--	--
Benzo[a]anthracene	0.023 J	0.1	0.065	0.9	1.8	1.1	--
Benzo[a]pyrene	0.026 J	0.15 †	0.084	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.046	0.26	0.16	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.03 J	0.14	0.11	--	--	--	--
Benzo[k]fluoranthene	0.022 J	0.11	0.047	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	0.2	0.11 J	46	--	--	--
Chrysene	0.029 J	0.15	0.092	88	--	--	--
Dibenzo(a,h)anthracene	ND U	0.039	ND U	0.09	0.42	0.2	--
Fluoranthene	0.033 J	0.18	0.097	3,100	--	--	--
Fluorene	ND U	0.0058 J	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	ND U	0.13	0.078	0.9	1.6	0.9	--
Naphthalene	0.0062 J	ND U	ND U	1.8	--	--	--
Phenanthrene	0.024 J	0.11	0.047	--	--	--	--
Pyrene	0.066	0.4	0.21	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	0.27 J	ND U	ND U	5	--	--	--
Arsenic	3.2	2.9	4.7	11.3	13	--	--
Barium	33	49	64	1,500	--	--	--
Beryllium	0.27	0.27	0.42	22	--	--	--
Boron	7.3	7.8	5	40	--	--	--
Cadmium	0.18	0.16	0.21	5.2	--	--	--
Calcium	130,000	120,000	55,000	--	--	--	--
Chromium	7.1	10	14	21	--	--	--
Cobalt	4	3.7	7.2	20	--	--	--
Copper	12	12	16	2,900	--	--	--
Iron	7,800	8,000	13,000	15,000	15,900	--	--
Lead	36	42	57	107	--	--	--
Magnesium	77,000	68,000	27,000	325,000	--	--	--
Manganese	320	310	490	630	636	--	--
Mercury	0.012 J	0.012 J	0.024	0.89	--	--	--
Nickel	9	9.5	14	100	--	--	--
Potassium	660	690	820	--	--	--	--
Selenium	0.31 J	0.24 J	0.43 J	1.3	--	--	--
Sodium	890	2,400	1,200	--	--	--	--
Vanadium	12	14	20	550	--	--	--
Zinc	29	41	82	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	0.54	0.56	0.47 J	--	--	--	2
Boron	0.64	0.72	0.89	--	--	--	2
Cobalt	0.016 J	ND U	ND U	--	--	--	1
Manganese	5.4 L	2 L	1 L	--	--	--	0.15
Nickel	0.018 J	0.012 J	0.012 J	--	--	--	0.1
Zinc	ND U	ND U	ND U	--	--	--	5
SPLP Metals (mg/L)							
Manganese	0.29 L	0.29 L	0.37 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: 500-107558-2
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:18:51 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
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Have a Question?



Visit us at:
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Job ID: 500-107558-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-2

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323717 recovered outside control limits for the following analyte: 2-Butanone.

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 samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-70-B01 (0-1) (500-107558-10), 3011-70-B02 (0-1) (500-107558-11), 3011-70-B03 (0-1) (500-107558-12), 3011-70-B04 (0-1) (500-107558-13), (500-107558-E-1-B MS) and (500-107558-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B01 (0-1)

Lab Sample ID: 500-107558-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0062	J	0.035	0.0054	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.018	J	0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.024	J	0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.033	J	0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.066		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.023	J	0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.029	J	0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.046		0.035	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.022	J	0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.026	J	0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.030	J	0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.27	J	0.86	0.18	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.2		0.43	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	33		0.43	0.079	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.17	0.037	mg/Kg	1	☼	6010B	Total/NA
Boron	7.3		2.2	0.30	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.086	0.025	mg/Kg	1	☼	6010B	Total/NA
Calcium	130000	B	86	28	mg/Kg	10	☼	6010B	Total/NA
Chromium	7.1	B	0.43	0.074	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.0		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.43	0.093	mg/Kg	1	☼	6010B	Total/NA
Iron	7800		8.6	3.3	mg/Kg	1	☼	6010B	Total/NA
Lead	36		0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	77000	B	43	17	mg/Kg	10	☼	6010B	Total/NA
Manganese	320		0.43	0.085	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.0		0.43	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	660		22	3.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.31	J	0.43	0.21	mg/Kg	1	☼	6010B	Total/NA
Sodium	890		43	5.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.22	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	29		0.86	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	0.54		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.64		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	5.4		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.018	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.071	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.29		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.018	0.0094	mg/Kg	1	☼	7471B	Total/NA
pH	8.82		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-70-B02 (0-1)

Lab Sample ID: 500-107558-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.0058	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.11		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.018	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.18		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.40		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.10		0.036	0.0049	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B02 (0-1) (Continued)

Lab Sample ID: 500-107558-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chrysene	0.15		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA	
Bis(2-ethylhexyl) phthalate	0.20		0.18	0.066	mg/Kg	1	☼	8270D	Total/NA	
Benzo[b]fluoranthene	0.26		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA	
Benzo[k]fluoranthene	0.11		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene	0.15		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.13		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA	
Dibenz(a,h)anthracene	0.039		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA	
Benzo[g,h,i]perylene	0.14		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA	
Arsenic	2.9		0.47	0.22	mg/Kg	1	☼	6010B	Total/NA	
Barium	49		0.47	0.085	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.27		0.19	0.040	mg/Kg	1	☼	6010B	Total/NA	
Boron	7.8		2.3	0.33	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.16		0.093	0.027	mg/Kg	1	☼	6010B	Total/NA	
Calcium	120000	B	93	30	mg/Kg	10	☼	6010B	Total/NA	
Chromium	10	B	0.47	0.080	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	3.7		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA	
Copper	12		0.47	0.10	mg/Kg	1	☼	6010B	Total/NA	
Iron	8000		9.3	3.6	mg/Kg	1	☼	6010B	Total/NA	
Lead	42		0.23	0.12	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	68000	B	47	19	mg/Kg	10	☼	6010B	Total/NA	
Manganese	310		0.47	0.092	mg/Kg	1	☼	6010B	Total/NA	
Nickel	9.5		0.47	0.13	mg/Kg	1	☼	6010B	Total/NA	
Potassium	690		23	3.8	mg/Kg	1	☼	6010B	Total/NA	
Selenium	0.24	J	0.47	0.23	mg/Kg	1	☼	6010B	Total/NA	
Sodium	2400		47	6.2	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	14		0.23	0.068	mg/Kg	1	☼	6010B	Total/NA	
Zinc	41		0.93	0.29	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.56		0.50	0.050	mg/L	1		6010B	TCLP	
Boron	0.72		0.50	0.050	mg/L	1		6010B	TCLP	
Manganese	2.0		0.025	0.010	mg/L	1		6010B	TCLP	
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP	
Zinc	0.088	J B	0.50	0.020	mg/L	1		6010B	TCLP	
Manganese	0.29		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.012	J	0.018	0.0096	mg/Kg	1	☼	7471B	Total/NA	
pH	8.80		0.200	0.200	SU	1		9045D	Total/NA	

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

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Client Sample ID: 3011-70-B04 (0-1)

Lab Sample ID: 500-107558-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.047		0.042	0.0058	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.042	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.097		0.042	0.0078	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.21		0.042	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.065		0.042	0.0056	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.042	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.11	J	0.21	0.077	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.042	0.0090	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.047		0.042	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.084		0.042	0.0081	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.078		0.042	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.11		0.042	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.7		0.48	0.22	mg/Kg	1	☼	6010B	Total/NA
Barium	64		0.48	0.088	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.42		0.19	0.042	mg/Kg	1	☼	6010B	Total/NA
Boron	5.0		2.4	0.34	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.21		0.096	0.028	mg/Kg	1	☼	6010B	Total/NA
Calcium	55000	B	96	31	mg/Kg	10	☼	6010B	Total/NA
Chromium	14	B	0.48	0.082	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.2		0.24	0.054	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B04 (0-1) (Continued)

Lab Sample ID: 500-107558-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	16		0.48	0.10	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		9.6	3.7	mg/Kg	1	☼	6010B	Total/NA
Lead	57		0.24	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	27000	B	4.8	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	490		0.48	0.095	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.48	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	820		24	3.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.43	J	0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Sodium	1200		48	6.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.24	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	82		0.96	0.30	mg/Kg	1	☼	6010B	Total/NA
Barium	0.47	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.89		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.31	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.37		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.024		0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	7.82		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-10	3011-70-B01 (0-1)	Solid	02/12/16 14:10	02/13/16 08:00
500-107558-11	3011-70-B02 (0-1)	Solid	02/12/16 14:25	02/13/16 08:00
500-107558-13	3011-70-B04 (0-1)	Solid	02/12/16 14:40	02/13/16 08:00

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B01 (0-1)

Lab Sample ID: 500-107558-10

Date Collected: 02/12/16 14:10

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 91.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.021		0.021	0.0040	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Benzene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Bromodichloromethane	<0.0052		0.0052	0.00088	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Bromoform	<0.0052		0.0052	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Bromomethane	<0.0052		0.0052	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
2-Butanone (MEK)	<0.0052 *		0.0052	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Carbon disulfide	<0.0052		0.0052	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Carbon tetrachloride	<0.0052		0.0052	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Chlorobenzene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Chloroethane	<0.0052		0.0052	0.0022	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Chloroform	<0.0052		0.0052	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Chloromethane	<0.0052		0.0052	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
cis-1,2-Dichloroethene	<0.0052		0.0052	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
cis-1,3-Dichloropropene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Dibromochloromethane	<0.0052		0.0052	0.00060	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,1-Dichloroethane	<0.0052		0.0052	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,2-Dichloroethane	<0.0052		0.0052	0.00077	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,1-Dichloroethene	<0.0052		0.0052	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,2-Dichloropropane	<0.0052		0.0052	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,3-Dichloropropane, Total	<0.0052		0.0052	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Ethylbenzene	<0.0052		0.0052	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
2-Hexanone	<0.0052		0.0052	0.0016	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Methylene Chloride	<0.0052		0.0052	0.0039	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
4-Methyl-2-pentanone (MIBK)	<0.0052		0.0052	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Methyl tert-butyl ether	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Styrene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,1,2,2-Tetrachloroethane	<0.0052		0.0052	0.00083	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Tetrachloroethene	<0.0052		0.0052	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Toluene	<0.0052		0.0052	0.0018	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
trans-1,2-Dichloroethene	<0.0052		0.0052	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
trans-1,3-Dichloropropene	<0.0052		0.0052	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,1,1-Trichloroethane	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
1,1,2-Trichloroethane	<0.0052		0.0052	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Trichloroethene	<0.0052		0.0052	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Vinyl acetate	<0.0052		0.0052	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Vinyl chloride	<0.0052		0.0052	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/13/16 09:15	02/20/16 16:52	1
Dibromofluoromethane	105		75 - 120	02/13/16 09:15	02/20/16 16:52	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 134	02/13/16 09:15	02/20/16 16:52	1
Toluene-d8 (Surr)	110		75 - 122	02/13/16 09:15	02/20/16 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.079	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
 Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B01 (0-1)

Lab Sample ID: 500-107558-10

Date Collected: 02/12/16 14:10

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 91.2

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	☼	02/18/16 07:07	02/25/16 01:27	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Nitrobenzene	<0.035		0.035	0.0088	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Naphthalene	0.0062	J	0.035	0.0054	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4-Chloroaniline	<0.71		0.71	0.17	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2-Methylnaphthalene	0.018	J	0.035	0.0065	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Acenaphthene	<0.035		0.035	0.0064	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4-Nitrophenol	<0.71		0.71	0.34	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Hexachlorobenzene	<0.071		0.071	0.0082	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Pentachlorophenol	<0.71		0.71	0.57	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Phenanthrene	0.024	J	0.035	0.0049	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Anthracene	<0.035		0.035	0.0059	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Carbazole	<0.18		0.18	0.088	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Fluoranthene	0.033	J	0.035	0.0066	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Pyrene	0.066		0.035	0.0070	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Benzo[a]anthracene	0.023	J	0.035	0.0048	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B01 (0-1)

Lab Sample ID: 500-107558-10

Date Collected: 02/12/16 14:10

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 91.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.029	J	0.035	0.0097	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Benzo[b]fluoranthene	0.046		0.035	0.0076	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Benzo[k]fluoranthene	0.022	J	0.035	0.010	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Benzo[a]pyrene	0.026	J	0.035	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Indeno[1,2,3-cd]pyrene	<0.035		0.035	0.0092	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
Benzo[g,h,i]perylene	0.030	J	0.035	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 01:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	73		25 - 110	02/18/16 07:07	02/25/16 01:27	1
Phenol-d5	72		31 - 110	02/18/16 07:07	02/25/16 01:27	1
Nitrobenzene-d5	67		25 - 115	02/18/16 07:07	02/25/16 01:27	1
2-Fluorobiphenyl	71		25 - 119	02/18/16 07:07	02/25/16 01:27	1
2,4,6-Tribromophenol	85		35 - 137	02/18/16 07:07	02/25/16 01:27	1
Terphenyl-d14	184	X	36 - 134	02/18/16 07:07	02/25/16 01:27	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.27	J	0.86	0.18	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Arsenic	3.2		0.43	0.20	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Barium	33		0.43	0.079	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Beryllium	0.27		0.17	0.037	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Boron	7.3		2.2	0.30	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Cadmium	0.18		0.086	0.025	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Calcium	130000	B	86	28	mg/Kg	☼	02/25/16 08:58	02/26/16 13:23	10
Chromium	7.1	B	0.43	0.074	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Cobalt	4.0		0.22	0.049	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Copper	12		0.43	0.093	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Iron	7800		8.6	3.3	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Lead	36		0.22	0.11	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Magnesium	77000	B	43	17	mg/Kg	☼	02/25/16 08:58	02/26/16 13:23	10
Manganese	320		0.43	0.085	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Nickel	9.0		0.43	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Potassium	660		22	3.5	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Selenium	0.31	J	0.43	0.21	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Silver	<0.22		0.22	0.050	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Sodium	890		43	5.7	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Thallium	<0.43		0.43	0.21	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Vanadium	12		0.22	0.063	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1
Zinc	29		0.86	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 19:09	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.54		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 12:25	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 12:25	1
Boron	0.64		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 12:25	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B01 (0-1)

Lab Sample ID: 500-107558-10

Date Collected: 02/12/16 14:10

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 91.2

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		02/18/16 16:22	02/20/16 12:25	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:25	1
Cobalt	0.016	J	0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:25	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 12:25	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 12:25	1
Manganese	5.4		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:25	1
Nickel	0.018	J	0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:25	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 12:25	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:25	1
Zinc	0.071	J B	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 12:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.29		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 06:49	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		02/18/16 16:22	02/19/16 13:42	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 13:42	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:25	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.018	0.0094	mg/Kg	☼	02/18/16 16:00	02/19/16 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.82		0.200	0.200	SU			02/18/16 22:47	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B02 (0-1)

Lab Sample ID: 500-107558-11

Date Collected: 02/12/16 14:25

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Bromodichloromethane	<0.0048		0.0048	0.00080	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Bromoform	<0.0048		0.0048	0.00097	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Bromomethane	<0.0048	*	0.0048	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Chloroethane	<0.0048	*	0.0048	0.0020	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Chloromethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00097	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,1-Dichloroethane	<0.0048		0.0048	0.00098	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,2-Dichloroethane	<0.0048		0.0048	0.00070	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,2-Dichloropropane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,3-Dichloropropane, Total	<0.0048		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00098	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Tetrachloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00092	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 22:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 122	02/13/16 09:15	02/19/16 22:29	1
Dibromofluoromethane	104		75 - 120	02/13/16 09:15	02/19/16 22:29	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	02/13/16 09:15	02/19/16 22:29	1
Toluene-d8 (Surr)	110		75 - 122	02/13/16 09:15	02/19/16 22:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B02 (0-1)

Lab Sample ID: 500-107558-11

Date Collected: 02/12/16 14:25

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.7

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	☼	02/18/16 07:07	02/25/16 01:55	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Fluorene	0.0058	J	0.036	0.0051	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Phenanthrene	0.11		0.036	0.0051	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Anthracene	0.018	J	0.036	0.0061	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Fluoranthene	0.18		0.036	0.0067	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Pyrene	0.40		0.036	0.0072	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Benzo[a]anthracene	0.10		0.036	0.0049	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B02 (0-1)

Lab Sample ID: 500-107558-11

Date Collected: 02/12/16 14:25

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.15		0.036	0.0099	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Bis(2-ethylhexyl) phthalate	0.20		0.18	0.066	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Benzo[b]fluoranthene	0.26		0.036	0.0078	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Benzo[k]fluoranthene	0.11		0.036	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Benzo[a]pyrene	0.15		0.036	0.0070	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Indeno[1,2,3-cd]pyrene	0.13		0.036	0.0094	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Dibenz(a,h)anthracene	0.039		0.036	0.0070	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
Benzo[g,h,i]perylene	0.14		0.036	0.012	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 07:07	02/25/16 01:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		25 - 110	02/18/16 07:07	02/25/16 01:55	1
Phenol-d5	79		31 - 110	02/18/16 07:07	02/25/16 01:55	1
Nitrobenzene-d5	74		25 - 115	02/18/16 07:07	02/25/16 01:55	1
2-Fluorobiphenyl	80		25 - 119	02/18/16 07:07	02/25/16 01:55	1
2,4,6-Tribromophenol	98		35 - 137	02/18/16 07:07	02/25/16 01:55	1
Terphenyl-d14	222 X		36 - 134	02/18/16 07:07	02/25/16 01:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.93		0.93	0.19	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Arsenic	2.9		0.47	0.22	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Barium	49		0.47	0.085	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Beryllium	0.27		0.19	0.040	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Boron	7.8		2.3	0.33	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Cadmium	0.16		0.093	0.027	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Calcium	120000	B	93	30	mg/Kg	☼	02/25/16 08:58	02/26/16 13:27	10
Chromium	10	B	0.47	0.080	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Cobalt	3.7		0.23	0.053	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Copper	12		0.47	0.10	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Iron	8000		9.3	3.6	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Lead	42		0.23	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Magnesium	68000	B	47	19	mg/Kg	☼	02/25/16 08:58	02/26/16 13:27	10
Manganese	310		0.47	0.092	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Nickel	9.5		0.47	0.13	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Potassium	690		23	3.8	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Selenium	0.24	J	0.47	0.23	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Silver	<0.23		0.23	0.055	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Sodium	2400		47	6.2	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Thallium	<0.47		0.47	0.23	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Vanadium	14		0.23	0.068	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1
Zinc	41		0.93	0.29	mg/Kg	☼	02/25/16 08:58	02/25/16 19:14	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.56		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 12:32	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 12:32	1
Boron	0.72		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 12:32	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B02 (0-1)

Lab Sample ID: 500-107558-11

Date Collected: 02/12/16 14:25

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 86.7

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		02/18/16 16:22	02/20/16 12:32	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:32	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:32	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 12:32	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 12:32	1
Manganese	2.0		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:32	1
Nickel	0.012	J	0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:32	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 12:32	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 12:32	1
Zinc	0.088	J B	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 12:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.29		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 06:56	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		02/18/16 16:22	02/19/16 13:47	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 13:47	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:27	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.018	0.0096	mg/Kg	☼	02/18/16 16:00	02/19/16 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.80		0.200	0.200	SU			02/18/16 22:54	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B04 (0-1)

Lab Sample ID: 500-107558-13

Date Collected: 02/12/16 14:40

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 78.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0042	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Benzene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Bromodichloromethane	<0.0054		0.0054	0.00091	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Bromoform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Bromomethane	<0.0054 *		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
2-Butanone (MEK)	<0.0054		0.0054	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Carbon disulfide	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Carbon tetrachloride	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Chlorobenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Chloroethane	<0.0054 *		0.0054	0.0023	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Chloroform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Chloromethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
cis-1,2-Dichloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
cis-1,3-Dichloropropene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Dibromochloromethane	<0.0054		0.0054	0.00062	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,1-Dichloroethane	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,2-Dichloroethane	<0.0054		0.0054	0.00080	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,1-Dichloroethene	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,2-Dichloropropane	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,3-Dichloropropane, Total	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Ethylbenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Methylene Chloride	<0.0054		0.0054	0.0041	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Methyl tert-butyl ether	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Styrene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,1,2,2-Tetrachloroethane	<0.0054		0.0054	0.00086	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Tetrachloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Toluene	<0.0054		0.0054	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
trans-1,2-Dichloroethene	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
trans-1,3-Dichloropropene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,1,1-Trichloroethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
1,1,2-Trichloroethane	<0.0054		0.0054	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Trichloroethene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Vinyl acetate	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Vinyl chloride	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/13/16 09:15	02/19/16 23:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 122	02/13/16 09:15	02/19/16 23:19	1
Dibromofluoromethane	105		75 - 120	02/13/16 09:15	02/19/16 23:19	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 134	02/13/16 09:15	02/19/16 23:19	1
Toluene-d8 (Surr)	112		75 - 122	02/13/16 09:15	02/19/16 23:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.093	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B04 (0-1)

Lab Sample ID: 500-107558-13

Date Collected: 02/12/16 14:40

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 78.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2-Methylphenol	<0.21		0.21	0.067	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
N-Nitrosodi-n-propylamine	<0.084		0.084	0.051	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Hexachloroethane	<0.21		0.21	0.064	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Nitrobenzene	<0.042		0.042	0.010	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,4-Dimethylphenol	<0.42		0.42	0.16	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Naphthalene	<0.042		0.042	0.0064	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,4-Dichlorophenol	<0.42		0.42	0.099	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4-Chloroaniline	<0.84		0.84	0.20	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,4,6-Trichlorophenol	<0.42		0.42	0.14	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,4,5-Trichlorophenol	<0.42		0.42	0.096	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Hexachlorocyclopentadiene	<0.84		0.84	0.24	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2-Methylnaphthalene	<0.042		0.042	0.0077	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4-Chloro-3-methylphenol	<0.42		0.42	0.14	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,6-Dinitrotoluene	<0.21		0.21	0.082	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2-Nitrophenol	<0.42		0.42	0.099	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
3-Nitroaniline	<0.42		0.42	0.13	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,4-Dinitrophenol	<0.84		0.84	0.74	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Acenaphthylene	<0.042		0.042	0.0055	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
2,4-Dinitrotoluene	<0.21		0.21	0.067	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Acenaphthene	<0.042		0.042	0.0075	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4-Nitrophenol	<0.84		0.84	0.40	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Fluorene	<0.042		0.042	0.0059	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4-Nitroaniline	<0.42		0.42	0.18	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Hexachlorobenzene	<0.084		0.084	0.0097	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Diethyl phthalate	<0.21		0.21	0.071	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Pentachlorophenol	<0.84		0.84	0.67	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
4,6-Dinitro-2-methylphenol	<0.84		0.84	0.34	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Phenanthrene	0.047		0.042	0.0058	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Anthracene	0.011 J		0.042	0.0070	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Fluoranthene	0.097		0.042	0.0078	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Pyrene	0.21		0.042	0.0083	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Butyl benzyl phthalate	<0.21		0.21	0.080	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Benzo[a]anthracene	0.065		0.042	0.0056	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B04 (0-1)

Lab Sample ID: 500-107558-13

Date Collected: 02/12/16 14:40

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 78.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.092		0.042	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Bis(2-ethylhexyl) phthalate	0.11	J	0.21	0.077	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Di-n-octyl phthalate	<0.21		0.21	0.068	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Benzo[b]fluoranthene	0.16		0.042	0.0090	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Benzo[k]fluoranthene	0.047		0.042	0.012	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Benzo[a]pyrene	0.084		0.042	0.0081	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Indeno[1,2,3-cd]pyrene	0.078		0.042	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Dibenz(a,h)anthracene	<0.042		0.042	0.0081	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
Benzo[g,h,i]perylene	0.11		0.042	0.013	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1
3 & 4 Methylphenol	<0.21		0.21	0.070	mg/Kg	☼	02/18/16 07:07	02/25/16 02:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	61		25 - 110	02/18/16 07:07	02/25/16 02:52	1
Phenol-d5	62		31 - 110	02/18/16 07:07	02/25/16 02:52	1
Nitrobenzene-d5	57		25 - 115	02/18/16 07:07	02/25/16 02:52	1
2-Fluorobiphenyl	64		25 - 119	02/18/16 07:07	02/25/16 02:52	1
2,4,6-Tribromophenol	93		35 - 137	02/18/16 07:07	02/25/16 02:52	1
Terphenyl-d14	197	X	36 - 134	02/18/16 07:07	02/25/16 02:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.96		0.96	0.20	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Arsenic	4.7		0.48	0.22	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Barium	64		0.48	0.088	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Beryllium	0.42		0.19	0.042	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Boron	5.0		2.4	0.34	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Cadmium	0.21		0.096	0.028	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Calcium	55000	B	96	31	mg/Kg	☼	02/25/16 08:58	02/26/16 13:35	10
Chromium	14	B	0.48	0.082	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Cobalt	7.2		0.24	0.054	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Copper	16		0.48	0.10	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Iron	13000		9.6	3.7	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Lead	57		0.24	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Magnesium	27000	B	4.8	1.9	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Manganese	490		0.48	0.095	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Nickel	14		0.48	0.13	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Potassium	820		24	3.9	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Selenium	0.43	J	0.48	0.24	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Silver	<0.24		0.24	0.056	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Sodium	1200		48	6.3	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Thallium	<0.48		0.48	0.24	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Vanadium	20		0.24	0.070	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1
Zinc	82		0.96	0.30	mg/Kg	☼	02/25/16 08:58	02/25/16 19:24	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.47	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:01	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 13:01	1
Boron	0.89		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:01	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Client Sample ID: 3011-70-B04 (0-1)

Lab Sample ID: 500-107558-13

Date Collected: 02/12/16 14:40

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 78.6

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		02/18/16 16:22	02/20/16 13:01	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:01	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:01	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 13:01	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 13:01	1
Manganese	1.0		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:01	1
Nickel	0.012	J	0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:01	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 13:01	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:01	1
Zinc	0.31	J B	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 13:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.37		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 07:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 16:22	02/19/16 13:55	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 13:55	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.024		0.019	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.82		0.200	0.200	SU			02/18/16 23:06	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-2

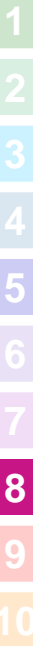
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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)	Bill To _____ (optional)
Contact: _____	Contact: _____
Company: _____	Company: _____
Address: _____	Address: _____
Address: _____	Address: _____
Phone: _____	Phone: _____
Fax: _____	Fax: _____
E-Mail: _____	PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-107558

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
EE		1609341.0009-01										
Project Name		Lab Project #										
TC 38		50011864										
Project Location/State		Lab PM										
Kane County, FL		D. Wright										
Sampler												
S. Cooper												
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOC	SVOC	Total PAH	Total PAH	Total PAH	174/96 Sulf
			Date	Time								
10		3011-70-B01 (ot)	2/12/16	1410	2	S	X	X	X	X	X	
11		3011-70-B02 (ot)	2/12/16	1425	2	S	X	X	X	X	X	
12		3011-70-B03 (ot)	2/12/16	1430	2	S	X	X	X	X	X	
13		3011-70-B04 (ot)	2/12/16	1440	2	S	X	X	X	X	X	
 2/12/16 [Handwritten signature and notes] 												

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

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

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

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	EE	2/12/16	1615	<i>[Signature]</i>	TA	2/12/16	1605
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	TA	2/12/16	1815	<i>[Signature]</i>	TA	2/13/16	0800

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: 500-107558-2

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Project Name: FAP 347 (IL Route 38)

Latitude: 41.90654165 Longitude: -88.43231174

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 3011-71-B01 was sampled within the construction zone adjacent to ISGS #3011-71 (5 Residences). Refer to PSI Report for ISGS #3011-71 (5 Residences) including Table 4-4, and Figures 4-10A&B.

- 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 J107558-3.

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

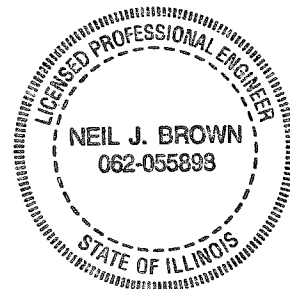
Neil J. Brown

Printed Name:

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

3/17/14

Date:



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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.90654165 Longitude: -88.43231174

Uncontaminated Site Certification

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- 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 J107558-3.

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:

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-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-71 (5 Residences)	Comparison Criteria			
		MACs			TACO
BORING	3011-71-B01				
SAMPLE	3011-71-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.79	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	0.0075 J	570	--	--	--
Anthracene	0.024 J	12,000	--	--	--
Benzo[a]anthracene	0.091	0.9	1.8	1.1	--
Benzo[a]pyrene	0.1 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.17	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.085	--	--	--	--
Benzo[k]fluoranthene	0.071	9	--	--	--
Chrysene	0.11	88	--	--	--
Dibenzo(a,h)anthracene	0.02 J	0.09	0.42	0.2	--
Fluoranthene	0.17	3,100	--	--	--
Fluorene	0.0076 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.088	0.9	1.6	0.9	--
Phenanthrene	0.14	--	--	--	--
Pyrene	0.35	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	0.21 J	5	--	--	--
Arsenic	2.1	11.3	13	--	--
Barium	21	1,500	--	--	--
Beryllium	0.2	22	--	--	--
Boron	10	40	--	--	--
Cadmium	0.09	5.2	--	--	--
Calcium	170,000	--	--	--	--
Chromium	5	21	--	--	--
Cobalt	2.4	20	--	--	--
Copper	7.8	2,900	--	--	--
Iron	7,000	15,000	15,900	--	--
Lead	12	107	--	--	--
Magnesium	100,000	325,000	--	--	--
Manganese	260	630	636	--	--
Mercury	0.01 J	0.89	--	--	--
Nickel	5.8	100	--	--	--
Potassium	490	--	--	--	--
Selenium	0.3 J	1.3	--	--	--
Sodium	470	--	--	--	--
Vanadium	7.3	550	--	--	--
Zinc	20	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.44 J	--	--	--	2
Boron	0.79	--	--	--	2
Manganese	0.48 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.066	--	--	--	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: 500-107558-3
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:19:30 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
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www.testamericainc.com

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

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

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

1

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Job ID: 500-107558-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-3

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

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 samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-71-B01 (0-1) (500-107558-14), (500-107558-E-1-B MS) and (500-107558-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

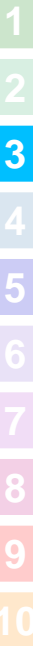
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0075	J	0.035	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0076	J	0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.024	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.17		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.35		0.035	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.091		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.11		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.17		0.035	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.071		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.088		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.020	J	0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.085		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.21	J	0.87	0.18	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.1		0.43	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	21		0.43	0.079	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.20		0.17	0.038	mg/Kg	1	☼	6010B	Total/NA
Boron	10		2.2	0.30	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.090		0.087	0.025	mg/Kg	1	☼	6010B	Total/NA
Calcium	170000	B	87	28	mg/Kg	10	☼	6010B	Total/NA
Chromium	5.0	B	0.43	0.074	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.4		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Copper	7.8		0.43	0.094	mg/Kg	1	☼	6010B	Total/NA
Iron	7000		8.7	3.3	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	100000	B	43	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	260		0.43	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	5.8		0.43	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	490		22	3.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.30	J	0.43	0.21	mg/Kg	1	☼	6010B	Total/NA
Sodium	470		43	5.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	7.3		0.22	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	20		0.87	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.79		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.48		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.066		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.010	J	0.018	0.0093	mg/Kg	1	☼	7471B	Total/NA
pH	8.79		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-14	3011-71-B01 (0-1)	Solid	02/12/16 09:05	02/13/16 08:00

1

2

3

4

5

6

7

8

9

10

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Benzene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Bromodichloromethane	<0.0051		0.0051	0.00085	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Bromoform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Bromomethane	<0.0051	*	0.0051	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
2-Butanone (MEK)	<0.0051		0.0051	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Carbon disulfide	<0.0051		0.0051	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Carbon tetrachloride	<0.0051		0.0051	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chlorobenzene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chloroethane	<0.0051	*	0.0051	0.0021	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chloroform	<0.0051		0.0051	0.00099	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Chloromethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
cis-1,2-Dichloroethene	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
cis-1,3-Dichloropropene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Dibromochloromethane	<0.0051		0.0051	0.00058	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1-Dichloroethane	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,2-Dichloroethane	<0.0051		0.0051	0.00075	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1-Dichloroethene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,2-Dichloropropane	<0.0051		0.0051	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,3-Dichloropropane, Total	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Ethylbenzene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Methylene Chloride	<0.0051		0.0051	0.0038	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0010	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Methyl tert-butyl ether	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Styrene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1,2,2-Tetrachloroethane	<0.0051		0.0051	0.00080	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Tetrachloroethene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Toluene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
trans-1,2-Dichloroethene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
trans-1,3-Dichloropropene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1,1-Trichloroethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
1,1,2-Trichloroethane	<0.0051		0.0051	0.00098	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Trichloroethene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Vinyl acetate	<0.0051		0.0051	0.0014	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Vinyl chloride	<0.0051		0.0051	0.0012	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/13/16 09:15	02/19/16 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/13/16 09:15	02/19/16 23:44	1
Dibromofluoromethane	105		75 - 120	02/13/16 09:15	02/19/16 23:44	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	02/13/16 09:15	02/19/16 23:44	1
Toluene-d8 (Surr)	108		75 - 122	02/13/16 09:15	02/19/16 23:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.079	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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	☼	02/18/16 07:07	02/25/16 03:20	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dimethylphenol	<0.35		0.35	0.14	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Naphthalene	<0.035		0.035	0.0055	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dichlorophenol	<0.35		0.35	0.085	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachlorocyclopentadiene	<0.72		0.72	0.20	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Acenaphthene	0.0075	J	0.035	0.0064	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Fluorene	0.0076	J	0.035	0.0050	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Phenanthrene	0.14		0.035	0.0050	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Anthracene	0.024	J	0.035	0.0059	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Fluoranthene	0.17		0.035	0.0066	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Pyrene	0.35		0.035	0.0071	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[a]anthracene	0.091		0.035	0.0048	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.11		0.035	0.0097	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[b]fluoranthene	0.17		0.035	0.0077	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[k]fluoranthene	0.071		0.035	0.010	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[a]pyrene	0.10		0.035	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Indeno[1,2,3-cd]pyrene	0.088		0.035	0.0092	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Dibenz(a,h)anthracene	0.020	J	0.035	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
Benzo[g,h,i]perylene	0.085		0.035	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	74		25 - 110	02/18/16 07:07	02/25/16 03:20	1
Phenol-d5	74		31 - 110	02/18/16 07:07	02/25/16 03:20	1
Nitrobenzene-d5	71		25 - 115	02/18/16 07:07	02/25/16 03:20	1
2-Fluorobiphenyl	78		25 - 119	02/18/16 07:07	02/25/16 03:20	1
2,4,6-Tribromophenol	57		35 - 137	02/18/16 07:07	02/25/16 03:20	1
Terphenyl-d14	203	X	36 - 134	02/18/16 07:07	02/25/16 03:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.21	J	0.87	0.18	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Arsenic	2.1		0.43	0.20	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Barium	21		0.43	0.079	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Beryllium	0.20		0.17	0.038	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Boron	10		2.2	0.30	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Cadmium	0.090		0.087	0.025	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Calcium	170000	B	87	28	mg/Kg	☼	02/25/16 08:58	02/26/16 13:39	10
Chromium	5.0	B	0.43	0.074	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Cobalt	2.4		0.22	0.049	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Copper	7.8		0.43	0.094	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Iron	7000		8.7	3.3	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Lead	12		0.22	0.11	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Magnesium	100000	B	43	18	mg/Kg	☼	02/25/16 08:58	02/26/16 13:39	10
Manganese	260		0.43	0.086	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Nickel	5.8		0.43	0.12	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Potassium	490		22	3.5	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Selenium	0.30	J	0.43	0.21	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Silver	<0.22		0.22	0.051	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Sodium	470		43	5.7	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Thallium	<0.43		0.43	0.21	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Vanadium	7.3		0.22	0.063	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1
Zinc	20		0.87	0.27	mg/Kg	☼	02/25/16 08:58	02/25/16 19:29	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.44	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:08	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 13:08	1
Boron	0.79		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:08	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Client Sample ID: 3011-71-B01 (0-1)

Lab Sample ID: 500-107558-14

Date Collected: 02/12/16 09:05

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 90.6

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		02/18/16 16:22	02/20/16 13:08	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 13:08	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 13:08	1
Manganese	0.48		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 13:08	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:08	1
Zinc	0.25	J B	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 13:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.066		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 07:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 16:22	02/19/16 13:59	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 13:59	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.010	J	0.018	0.0093	mg/Kg	☼	02/18/16 16:00	02/19/16 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.79		0.200	0.200	SU			02/18/16 23:12	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-3

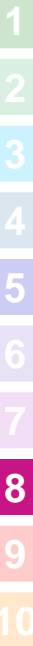
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107558
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCl, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other									
Project Name		Lab Project #																	
Project Location/State		Lab PM																	
Sampler																			
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix													
			Date	Time					Comments										
415		3011-71-BUI	2/2/16	0905	2	S	Voc	SVCC	Total TAC NAC ₂ G	Trippin the Matrix	P135 6/1/16								
2/2/16																			

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>EE</u> Date: <u>2/2/16</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TR</u> Date: <u>2/12/16</u> Time: <u>1605</u>
Relinquished By: <u>[Signature]</u> Company: <u>TR</u> Date: <u>2/2/16</u> Time: <u>1815</u>	Received By: <u>[Signature]</u> Company: <u>TR</u> Date: <u>2/12/16</u> Time: <u>0800</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: 500-107558-3

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
41W 500 IL 38 ISGS #3011-75 (Farmstead)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.906247 Longitude: -88.423867
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.906247 Longitude: -88.423867

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 3011-75-B03 was sampled within the construction zone adjacent to ISGS #3011-75 (Farmstead). Refer to PSI Report for ISGS #3011-75 (Farmstead) including Table 4-4, and Figures 4-11A&B.

- 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 J107509-1.

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 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:

3/17/16
 Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-75 (Farmstead)	Comparison Criteria			
		MACs			TACO
BORING	3011-75-B03				
SAMPLE	3011-75-B03 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.7	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthylene	0.011 J	--	--	--	--
Anthracene	0.015 J	12,000	--	--	--
Benzo[a]anthracene	0.11	0.9	1.8	1.1	--
Benzo[a]pyrene	0.13 J †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.28 J	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.084	--	--	--	--
Benzo[k]fluoranthene	0.12	9	--	--	--
Chrysene	0.15 J	88	--	--	--
Fluoranthene	0.24	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.069	0.9	1.6	0.9	--
Phenanthrene	0.075 J	--	--	--	--
Pyrene	0.24 J	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	2.9	11.3	13	--	--
Barium	22	1,500	--	--	--
Beryllium	0.26	22	--	--	--
Boron	6.5	40	--	--	--
Cadmium	0.16	5.2	--	--	--
Calcium	140,000	--	--	--	--
Chromium	9.4	21	--	--	--
Cobalt	3.6	20	--	--	--
Copper	13	2,900	--	--	--
Iron	7,400 J	15,000	15,900	--	--
Lead	59 J	107	--	--	--
Magnesium	87,000	325,000	--	--	--
Manganese	280 J	630	636	--	--
Mercury	0.023	0.89	--	--	--
Nickel	8.7 J	100	--	--	--
Potassium	550 J	--	--	--	--
Selenium	0.28 J	1.3	--	--	--
Sodium	870	--	--	--	--
Vanadium	10	550	--	--	--
Zinc	58 J	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.26 J	--	--	--	2
Boron	0.59	--	--	--	2
Manganese	0.8 L	--	--	--	0.15
Zinc	0.62	--	--	--	5
SPLP Metals (mg/L)					
Manganese	0.24 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: 500-107509-1
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:44:29 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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

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

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

1

2

3

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7

8

9

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Job ID: 500-107509-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-1

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-75-B03 (0-1) (500-107509-1), 3011-75-B02 (0-1) (500-107509-2), 3011-75-B01 (0-1) (500-107509-3), (MB 500-322967/1-A), (500-107509-E-1-B MS) and (500-107509-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-324053 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-75-B03 (0-1) (500-107509-1), 3011-75-B02 (0-1) (500-107509-2) and 3011-75-B01 (0-1) (500-107509-3).

Method(s) 6020A: The continuing calibration verifications (CCV) associated with batch 500-323369, at line 12, 24, 36, 49 and 61 recovered above the upper control limit for Thallium. The CCV at line 12 also recovered above the upper control limit for Sb. The low level CCV were all within control limits for this batch. The samples associated with these CCV were non-detects for the affected analytes; 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.

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Client Sample ID: 3011-75-B03 (0-1)

Lab Sample ID: 500-107509-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.011	J	0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.075	F1 F2	0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.24		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.24	F1 F2	0.040	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.11		0.040	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.15	F1	0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.28	F1	0.040	0.0088	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.13	F1	0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.069		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.084		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.9		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	22		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.26		0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	6.5		2.8	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000	B	110	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.4	B	0.57	0.098	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.6		0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7400		11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	59		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	87000	B	57	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	280		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.7		0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	550	F1	28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.28	J	0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	870		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.28	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	58	F1	1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.59		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.80		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.62		0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.24		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.70		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-1	3011-75-B03 (0-1)	Solid	02/11/16 15:30	02/12/16 07:55

1

2

3

4

5

6

7

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9

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Client Sample ID: 3011-75-B03 (0-1)

Lab Sample ID: 500-107509-1

Date Collected: 02/11/16 15:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0038	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Benzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Bromodichloromethane	<0.0049		0.0049	0.00082	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Bromoform	<0.0049		0.0049	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Bromomethane	<0.0049		0.0049	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
2-Butanone (MEK)	<0.0049		0.0049	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Carbon disulfide	<0.0049		0.0049	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Carbon tetrachloride	<0.0049		0.0049	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Chlorobenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Chloroethane	<0.0049		0.0049	0.0021	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Chloroform	<0.0049		0.0049	0.00095	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Chloromethane	<0.0049		0.0049	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
cis-1,2-Dichloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
cis-1,3-Dichloropropene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Dibromochloromethane	<0.0049		0.0049	0.00056	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,1-Dichloroethane	<0.0049		0.0049	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,2-Dichloroethane	<0.0049		0.0049	0.00072	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,1-Dichloroethene	<0.0049		0.0049	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,2-Dichloropropane	<0.0049		0.0049	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,3-Dichloropropane, Total	<0.0049		0.0049	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Ethylbenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Methylene Chloride	<0.0049		0.0049	0.0037	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Methyl tert-butyl ether	<0.0049		0.0049	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Styrene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,1,2,2-Tetrachloroethane	<0.0049		0.0049	0.00078	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Tetrachloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Toluene	<0.0049		0.0049	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
trans-1,2-Dichloroethene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
trans-1,3-Dichloropropene	<0.0049		0.0049	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,1,1-Trichloroethane	<0.0049		0.0049	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
1,1,2-Trichloroethane	<0.0049		0.0049	0.00095	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Trichloroethene	<0.0049		0.0049	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Vinyl acetate	<0.0049		0.0049	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Vinyl chloride	<0.0049		0.0049	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1
Xylenes, Total	<0.0098		0.0098	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 122	02/12/16 09:20	02/18/16 15:56	1
Dibromofluoromethane	93		75 - 120	02/12/16 09:20	02/18/16 15:56	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134	02/12/16 09:20	02/18/16 15:56	1
Toluene-d8 (Surr)	103		75 - 122	02/12/16 09:20	02/18/16 15:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20	F1	0.20	0.090	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
1,3-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Client Sample ID: 3011-75-B03 (0-1)

Lab Sample ID: 500-107509-1

Date Collected: 02/11/16 15:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.4

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	0.049	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
N-Nitrosodi-n-propylamine	<0.082		0.082	0.050	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Hexachloroethane	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.042	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Isophorone	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,4-Dimethylphenol	<0.40	F1 F2	0.40	0.15	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Hexachlorobutadiene	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Naphthalene	<0.040		0.040	0.0063	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,4-Dichlorophenol	<0.40	F1 F2	0.40	0.097	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4-Chloroaniline	<0.82	F2	0.82	0.19	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,4,5-Trichlorophenol	<0.40		0.40	0.093	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Hexachlorocyclopentadiene	<0.82	F1	0.82	0.23	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2-Methylnaphthalene	<0.040		0.040	0.0075	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2-Nitroaniline	<0.20		0.20	0.055	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2-Chloronaphthalene	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,6-Dinitrotoluene	<0.20		0.20	0.080	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2-Nitrophenol	<0.40		0.40	0.096	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,4-Dinitrophenol	<0.82		0.82	0.72	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Acenaphthylene	0.011	J	0.040	0.0054	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
2,4-Dinitrotoluene	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Acenaphthene	<0.040		0.040	0.0073	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Dibenzofuran	<0.20		0.20	0.048	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4-Nitrophenol	<0.82	F1	0.82	0.39	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4-Bromophenyl phenyl ether	<0.20	F1	0.20	0.054	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Hexachlorobenzene	<0.082	F1	0.082	0.0094	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Diethyl phthalate	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.048	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Pentachlorophenol	<0.82	F2	0.82	0.65	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
N-Nitrosodiphenylamine	<0.20	F1	0.20	0.048	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
4,6-Dinitro-2-methylphenol	<0.82		0.82	0.33	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Phenanthrene	0.075	F1 F2	0.040	0.0057	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Anthracene	0.015	J	0.040	0.0068	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Fluoranthene	0.24		0.040	0.0075	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Pyrene	0.24	F1 F2	0.040	0.0081	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Butyl benzyl phthalate	<0.20	F1	0.20	0.077	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Benzo[a]anthracene	0.11		0.040	0.0055	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Client Sample ID: 3011-75-B03 (0-1)

Lab Sample ID: 500-107509-1

Date Collected: 02/11/16 15:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.15	F1	0.040	0.011	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
3,3'-Dichlorobenzidine	<0.20	F1	0.20	0.057	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Bis(2-ethylhexyl) phthalate	<0.20	F1	0.20	0.074	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Di-n-octyl phthalate	<0.20	F1	0.20	0.066	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Benzo[b]fluoranthene	0.28	F1	0.040	0.0088	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Benzo[k]fluoranthene	0.12		0.040	0.012	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Benzo[a]pyrene	0.13	F1	0.040	0.0079	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Indeno[1,2,3-cd]pyrene	0.069		0.040	0.011	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0079	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
Benzo[g,h,i]perylene	0.084		0.040	0.013	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1
3 & 4 Methylphenol	<0.20		0.20	0.068	mg/Kg	☼	02/16/16 07:05	02/22/16 22:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	112	X	25 - 110	02/16/16 07:05	02/22/16 22:58	1
Phenol-d5	109		31 - 110	02/16/16 07:05	02/22/16 22:58	1
Nitrobenzene-d5	94		25 - 115	02/16/16 07:05	02/22/16 22:58	1
2-Fluorobiphenyl	87		25 - 119	02/16/16 07:05	02/22/16 22:58	1
2,4,6-Tribromophenol	99		35 - 137	02/16/16 07:05	02/22/16 22:58	1
Terphenyl-d14	146	X	36 - 134	02/16/16 07:05	02/22/16 22:58	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1	F1	1.1	0.24	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Arsenic	2.9		0.57	0.26	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Barium	22		0.57	0.10	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Beryllium	0.26		0.23	0.049	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Boron	6.5		2.8	0.40	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Cadmium	0.16		0.11	0.033	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Calcium	140000	B	110	37	mg/Kg	☼	02/17/16 15:16	02/22/16 22:32	10
Chromium	9.4	B	0.57	0.098	mg/Kg	☼	02/17/16 15:16	02/23/16 14:13	1
Cobalt	3.6		0.28	0.064	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Copper	13		0.57	0.12	mg/Kg	☼	02/17/16 15:16	02/23/16 14:13	1
Iron	7400		11	4.4	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Lead	59		0.28	0.14	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Magnesium	87000	B	57	23	mg/Kg	☼	02/17/16 15:16	02/22/16 22:32	10
Manganese	280		0.57	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Nickel	8.7		0.57	0.15	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Potassium	550	F1	28	4.6	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Selenium	0.28	J	0.57	0.28	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Silver	<0.28	^	0.28	0.067	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Sodium	870		57	7.5	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	1
Vanadium	10		0.28	0.083	mg/Kg	☼	02/17/16 15:16	02/23/16 14:13	1
Zinc	58	F1	1.1	0.36	mg/Kg	☼	02/17/16 15:16	02/22/16 20:42	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		02/16/16 14:27	02/21/16 12:36	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 12:36	1
Boron	0.59		0.50	0.050	mg/L		02/16/16 14:27	02/21/16 12:36	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Client Sample ID: 3011-75-B03 (0-1)

Lab Sample ID: 500-107509-1

Date Collected: 02/11/16 15:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.4

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		02/16/16 14:27	02/21/16 12:36	1
Chromium	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 12:36	1
Cobalt	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 12:36	1
Iron	<0.40		0.40	0.20	mg/L		02/16/16 14:27	02/21/16 12:36	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/16/16 14:27	02/21/16 12:36	1
Manganese	0.80		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 12:36	1
Nickel	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 12:36	1
Selenium	<0.050		0.050	0.020	mg/L		02/16/16 14:27	02/21/16 12:36	1
Silver	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 12:36	1
Zinc	0.62		0.50	0.020	mg/L		02/16/16 14:27	02/21/16 12:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.24		0.025	0.010	mg/L		02/17/16 08:31	02/19/16 23:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/16/16 14:27	02/17/16 20:35	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/16/16 14:27	02/17/16 20:35	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		02/17/16 16:15	02/18/16 11:23	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.70		0.200	0.200	SU			02/13/16 10:36	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-1

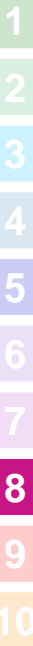
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 61
Phone: 708.534.5200 Fax: 708.534.5200



500-107509 COC

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 #: 500-107509

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler 2, 7, 3, 3, 8, 2, 4, 3, 1

Lab ID	IMS/MSD	Sample ID	Sampling		# of Containers	Matrix	Parameter					Comments
			Date	Time			VOC	S VOC	TOTAL TAC Metals	TWP/SP/3 TAC Metals	PH	
1		3011-75-1303(0-1)	2-11-16	1530	2	S	X	X	X	X	X	
2		3011-75-1302(0-1)	2-11-16	1535	2	S	X	X	X	X	X	
3		3011-75-1301(0-1)	2-11-16	1545	2	S	X	X	X	X	X	
2-11-16												

- 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

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>GE</u> Date: <u>2/11/16</u> Time: <u>1600</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/11/16</u> Time: <u>1200</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/11/16</u> Time: <u>1735</u>	Received By: <u>[Signature]</u> Company: <u>TA-CAT</u> Date: <u>2/12/16</u> Time: <u>0755</u>

Lab Courier: TA
Shipped: _____
Hand Delivered: _____

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

Client Comments: _____

Lab Comments: _____

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-1

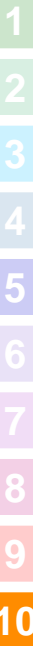
Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
41W 300 to 500 blocks of IL 38 ISGS #3011-76 (Agricultural Land)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.90632852 Longitude: -88.41932407
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90632852 Longitude: -88.41932407

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 3011-76-B01 was sampled within the construction zone adjacent to ISGS #3011-76 (Agricultural Land). Refer to PSI Report for ISGS #3011-76 (Agricultural Land) including Table 4-4, and Figures 4-11A&B.

- 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 J107509-2.

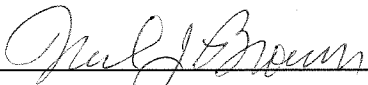
IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

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:


 Licensed Professional Engineer or
 Licensed Professional Geologist Signature:

3/17/14
 Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-76 (Agricultural Land)	Comparison Criteria			
BORING	3011-76-B01	MACs			TACO
SAMPLE	3011-76-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.98				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthylene	0.18	--	--	--	--
Anthracene	0.15	12,000	--	--	--
Benzo[a]anthracene	1.3 †*	0.9	1.8	1.1	--
Benzo[a]pyrene	1.1 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	1.9 †*	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.27	--	--	--	--
Benzo[k]fluoranthene	0.87	9	--	--	--
Chrysene	1.4	88	--	--	--
Dibenzo(a,h)anthracene	0.11 †	0.09	0.42	0.2	--
Fluoranthene	1.6	3,100	--	--	--
Fluorene	0.02 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.31	0.9	1.6	0.9	--
Naphthalene	0.0094 J	1.8	--	--	--
Phenanthrene	0.33	--	--	--	--
Pyrene	2.3	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	3.4	11.3	13	--	--
Barium	25	1,500	--	--	--
Beryllium	0.34	22	--	--	--
Boron	8.4	40	--	--	--
Cadmium	0.11	5.2	--	--	--
Calcium	120,000	--	--	--	--
Chromium	12	21	--	--	--
Cobalt	4.6	20	--	--	--
Copper	13	2,900	--	--	--
Iron	8,600	15,000	15,900	--	--
Lead	62	107	--	--	--
Magnesium	54,000	325,000	--	--	--
Manganese	310	630	636	--	--
Mercury	0.013 J	0.89	--	--	--
Nickel	10	100	--	--	--
Potassium	810	--	--	--	--
Selenium	0.39 J	1.3	--	--	--
Sodium	950	--	--	--	--
Vanadium	14	550	--	--	--
Zinc	46	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.26 J	--	--	--	2
Boron	0.25 J	--	--	--	2
Lead	0.0077 L	--	--	--	0.0075
Manganese	1 L	--	--	--	0.15
Zinc	0.18 J	--	--	--	5
SPLP Metals (mg/L)					
Lead	0.15 L	--	--	--	0.0075
Manganese	0.54 L	--	--	--	0.15

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107509-2
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:46:46 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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

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

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Job ID: 500-107509-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-2

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-76-B01 (0-1) (500-107509-4), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS) and (500-107509-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-324053 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-76-B01 (0-1) (500-107509-4) and (500-107509-E-1-D).

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Client Sample ID: 3011-76-B01 (0-1)

Lab Sample ID: 500-107509-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0094	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.18		0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.020	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.33		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.15		0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	1.6		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	2.3		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	1.3		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	1.4		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1.9		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.87		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	1.1		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.31		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	0.27		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.4		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	25		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.34		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	8.4		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.11		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	12	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.6		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8600		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	62		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	54000	B	5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	310		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	810		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.39	J	0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	950		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.25	J	0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.0077		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.18	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.15		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.54		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.98		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-4	3011-76-B01 (0-1)	Solid	02/11/16 15:15	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Client Sample ID: 3011-76-B01 (0-1)

Lab Sample ID: 500-107509-4

Date Collected: 02/11/16 15:15

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Bromodichloromethane	<0.0048		0.0048	0.00081	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Bromoform	<0.0048		0.0048	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Chloroform	<0.0048		0.0048	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Chloromethane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,1-Dichloroethane	<0.0048		0.0048	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,3-Dichloropropane, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,1,1,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00093	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1
Xylenes, Total	<0.0096		0.0096	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 122	02/12/16 09:20	02/19/16 12:51	1
Dibromofluoromethane	91		75 - 120	02/12/16 09:20	02/19/16 12:51	1
1,2-Dichloroethane-d4 (Surr)	83		70 - 134	02/12/16 09:20	02/19/16 12:51	1
Toluene-d8 (Surr)	106		75 - 122	02/12/16 09:20	02/19/16 12:51	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	☼	02/16/16 07:05	02/23/16 00:16	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Client Sample ID: 3011-76-B01 (0-1)

Lab Sample ID: 500-107509-4

Date Collected: 02/11/16 15:15

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.6

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	☼	02/16/16 07:05	02/23/16 00:16	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Naphthalene	0.0094	J	0.038	0.0059	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Acenaphthylene	0.18		0.038	0.0050	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Fluorene	0.020	J	0.038	0.0054	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Phenanthrene	0.33		0.038	0.0053	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Anthracene	0.15		0.038	0.0064	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Fluoranthene	1.6		0.038	0.0071	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Pyrene	2.3		0.038	0.0076	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Benzo[a]anthracene	1.3		0.038	0.0051	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Client Sample ID: 3011-76-B01 (0-1)

Lab Sample ID: 500-107509-4

Date Collected: 02/11/16 15:15

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	1.4		0.038	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Benzo[b]fluoranthene	1.9		0.038	0.0082	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Benzo[k]fluoranthene	0.87		0.038	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Benzo[a]pyrene	1.1		0.038	0.0074	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Indeno[1,2,3-cd]pyrene	0.31		0.038	0.0099	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Dibenz(a,h)anthracene	0.11		0.038	0.0074	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
Benzo[g,h,i]perylene	0.27		0.038	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 00:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	95		25 - 110	02/16/16 07:05	02/23/16 00:16	1
Phenol-d5	91		31 - 110	02/16/16 07:05	02/23/16 00:16	1
Nitrobenzene-d5	78		25 - 115	02/16/16 07:05	02/23/16 00:16	1
2-Fluorobiphenyl	73		25 - 119	02/16/16 07:05	02/23/16 00:16	1
2,4,6-Tribromophenol	86		35 - 137	02/16/16 07:05	02/23/16 00:16	1
Terphenyl-d14	153	X	36 - 134	02/16/16 07:05	02/23/16 00:16	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Arsenic	3.4		0.56	0.26	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Barium	25		0.56	0.10	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Beryllium	0.34		0.22	0.049	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Boron	8.4		2.8	0.39	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Cadmium	0.11		0.11	0.032	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Calcium	120000	B	110	36	mg/Kg	☼	02/17/16 15:16	02/22/16 23:01	10
Chromium	12	B	0.56	0.096	mg/Kg	☼	02/17/16 15:16	02/23/16 14:55	1
Cobalt	4.6		0.28	0.063	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Copper	13		0.56	0.12	mg/Kg	☼	02/17/16 15:16	02/23/16 14:55	1
Iron	8600		11	4.3	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Lead	62		0.28	0.14	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Magnesium	54000	B	5.6	2.3	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Manganese	310		0.56	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Nickel	10		0.56	0.15	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Potassium	810		28	4.6	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Selenium	0.39	J	0.56	0.28	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Silver	<0.28	^	0.28	0.066	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Sodium	950		56	7.4	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	1
Vanadium	14		0.28	0.082	mg/Kg	☼	02/17/16 15:16	02/23/16 14:55	1
Zinc	46		1.1	0.35	mg/Kg	☼	02/17/16 15:16	02/22/16 21:18	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		02/16/16 14:27	02/21/16 13:12	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 13:12	1
Boron	0.25	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:12	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Client Sample ID: 3011-76-B01 (0-1)

Lab Sample ID: 500-107509-4

Date Collected: 02/11/16 15:15

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.6

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	-	02/16/16 14:27	02/21/16 13:12	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Iron	<0.40		0.40	0.20	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Lead	0.0077		0.0075	0.0075	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Manganese	1.0		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Silver	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:12	1
Zinc	0.18	J	0.50	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:12	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.15		0.0075	0.0075	mg/L	-	02/17/16 08:31	02/20/16 00:15	1
Manganese	0.54		0.025	0.010	mg/L	-	02/17/16 08:31	02/20/16 00:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L	-	02/16/16 14:27	02/17/16 20:48	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/16/16 14:27	02/17/16 20:48	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/17/16 16:15	02/18/16 11:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	J	0.019	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 10:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.98		0.200	0.200	SU	-		02/13/16 10:42	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-2

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

TestAmerica

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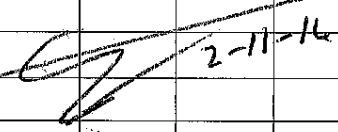
2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

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 #: 500-107509
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		1009341-0008-01								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Sampling		# of Containers		Matrix		Comments	
IL 30		S0011E64		Date Time		Date Time					
Project Location/State		Lab PM		Date		Time		Date		Time	
Kane County IL		D. Wang		2/11/16		11:15		2/11/16		11:15	
Sampler		Lab PM		Date		Time		Date		Time	
S. Lupe		D. Wang		2/11/16		11:15		2/11/16		11:15	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Preservative	Parameter	Matrix	Comments	
4		3011-76-B01(01)	2/11/16	11:15	2	S	X	X	X	X	
											

Turnaround Time Required (Business Days)

Requested Due Date: 1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other

Sample Disposal

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

Relinquished By: <u>[Signature]</u> Company: <u>EA</u> Date: <u>2/11/16</u> Time: <u>16:00</u>	Received By: <u>[Signature]</u> Company: <u>EA</u> Date: <u>2/11/16</u> Time: <u>16:00</u>
Relinquished By: <u>[Signature]</u> Company: <u>EA</u> Date: <u>2/11/16</u> Time: <u>11:30</u>	Received By: <u>[Signature]</u> Company: <u>EA-CPE</u> Date: <u>2/12/16</u> Time: <u>07:55</u>

Lab Courier: TA
Shipped: _____
Hand Delivered: _____

Matrix Key

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-2

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
41W 300 block of IL 38 ISGS #3011-78 (Vacant Land)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.906004 Longitude: -88.420811
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.906004 Longitude: -88.420811

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 3011-78-B02 was sampled within the construction zone adjacent to ISGS #3011-78 (Vacant Land). Refer to PSI Report for ISGS #3011-78 (Vacant Land) including Table 4-4, and Figures 4-11A&B.

- 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 J107558-8.

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:

3/17/16
 Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-78 (Vacant Land)	Comparison Criteria			
BORING	3011-78-B02	MACs			TACO
SAMPLE	3011-78-B02 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.9				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	0.016 J	570	--	--	--
Acenaphthylene	0.011 J	--	--	--	--
Anthracene	0.1	12,000	--	--	--
Benzo[a]anthracene	0.28	0.9	1.8	1.1	--
Benzo[a]pyrene	0.29 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.41	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.25	--	--	--	--
Benzo[k]fluoranthene	0.24	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.088 J	46	--	--	--
Chrysene	0.34	88	--	--	--
Dibenzo(a,h)anthracene	0.044	0.09	0.42	0.2	--
Fluoranthene	0.48	3,100	--	--	--
Fluorene	0.027 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.23	0.9	1.6	0.9	--
Phenanthrene	0.43	--	--	--	--
Pyrene	1.1	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	2.7	11.3	13	--	--
Barium	20	1,500	--	--	--
Beryllium	0.2 J	22	--	--	--
Boron	11	40	--	--	--
Cadmium	0.094 J	5.2	--	--	--
Calcium	150,000	--	--	--	--
Chromium	12	21	--	--	--
Cobalt	3.3	20	--	--	--
Copper	15	2,900	--	--	--
Iron	10,000	15,000	15,900	--	--
Lead	43	107	--	--	--
Magnesium	88,000	325,000	--	--	--
Manganese	360	630	636	--	--
Mercury	0.012 J	0.89	--	--	--
Nickel	8.2	100	--	--	--
Potassium	580	--	--	--	--
Selenium	0.47 J	1.3	--	--	--
Sodium	1,200	--	--	--	--
Vanadium	10	550	--	--	--
Zinc	62	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.27 J	--	--	--	2
Boron	0.77	--	--	--	2
Manganese	0.53 L	--	--	--	0.15
Zinc	0.51 J	--	--	--	5
SPLP Metals (mg/L)					
Manganese	0.59 L	--	--	--	0.15

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107558-8
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:22:32 PM
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Job ID: 500-107558-8

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-8

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323717 recovered outside control limits for the following analyte: 2-Butanone.

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 samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-78-B01 (0-1) (500-107558-19), 3011-78-B02 (0-1) (500-107558-20), (500-107558-E-1-B MS) and (500-107558-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323727 and analytical batch 500-324314 contained Calcium above the reporting limit (RL). Associated samples 3011-78-B01 (0-1) (500-107558-19) and 3011-78-B02 (0-1) (500-107558-20) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

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Client Sample ID: 3011-78-B02 (0-1)

Lab Sample ID: 500-107558-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthylene	0.011	J	0.038	0.0051	mg/Kg	1	*	*	8270D	Total/NA
Acenaphthene	0.016	J	0.038	0.0069	mg/Kg	1	*	*	8270D	Total/NA
Fluorene	0.027	J	0.038	0.0054	mg/Kg	1	*	*	8270D	Total/NA
Phenanthrene	0.43		0.038	0.0054	mg/Kg	1	*	*	8270D	Total/NA
Anthracene	0.10		0.038	0.0064	mg/Kg	1	*	*	8270D	Total/NA
Fluoranthene	0.48		0.038	0.0072	mg/Kg	1	*	*	8270D	Total/NA
Pyrene	1.1		0.038	0.0077	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]anthracene	0.28		0.038	0.0052	mg/Kg	1	*	*	8270D	Total/NA
Chrysene	0.34		0.038	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Client Sample ID: 3011-78-B02 (0-1) (Continued)

Lab Sample ID: 500-107558-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	0.088	J	0.19	0.070	mg/Kg	1	☼	8270D	Total/NA	
Benzo[b]fluoranthene	0.41		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA	
Benzo[k]fluoranthene	0.24		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene	0.29		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.23		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA	
Dibenz(a,h)anthracene	0.044		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA	
Benzo[g,h,i]perylene	0.25		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA	
Arsenic	2.7		0.58	0.27	mg/Kg	1	☼	6010B	Total/NA	
Barium	20		0.58	0.11	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.20	J	0.23	0.050	mg/Kg	1	☼	6010B	Total/NA	
Boron	11		2.9	0.41	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.094	J	0.12	0.034	mg/Kg	1	☼	6010B	Total/NA	
Calcium	150000		120	37	mg/Kg	10	☼	6010B	Total/NA	
Chromium	12		0.58	0.10	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	3.3		0.29	0.066	mg/Kg	1	☼	6010B	Total/NA	
Copper	15		0.58	0.13	mg/Kg	1	☼	6010B	Total/NA	
Iron	10000		120	45	mg/Kg	10	☼	6010B	Total/NA	
Lead	43		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	88000		58	24	mg/Kg	10	☼	6010B	Total/NA	
Manganese	360		0.58	0.12	mg/Kg	1	☼	6010B	Total/NA	
Nickel	8.2		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA	
Potassium	580		29	4.7	mg/Kg	1	☼	6010B	Total/NA	
Selenium	0.47	J	0.58	0.29	mg/Kg	1	☼	6010B	Total/NA	
Sodium	1200		58	7.7	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	10		0.29	0.085	mg/Kg	1	☼	6010B	Total/NA	
Zinc	62		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP	
Boron	0.77		0.50	0.050	mg/L	1		6010B	TCLP	
Manganese	0.53		0.025	0.010	mg/L	1		6010B	TCLP	
Zinc	0.51	B F1	0.50	0.020	mg/L	1		6010B	TCLP	
Manganese	0.59		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.012	J	0.017	0.0091	mg/Kg	1	☼	7471B	Total/NA	
pH	8.90		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-20	3011-78-B02 (0-1)	Solid	02/12/16 15:20	02/13/16 08:00

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Client Sample ID: 3011-78-B02 (0-1)

Lab Sample ID: 500-107558-20

Date Collected: 02/12/16 15:20

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0042	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Benzene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Bromodichloromethane	<0.0054		0.0054	0.00091	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Bromoform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Bromomethane	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
2-Butanone (MEK)	<0.0054 *		0.0054	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Carbon disulfide	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Carbon tetrachloride	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Chlorobenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Chloroethane	<0.0054		0.0054	0.0023	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Chloroform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Chloromethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
cis-1,2-Dichloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
cis-1,3-Dichloropropene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Dibromochloromethane	<0.0054		0.0054	0.00062	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,1-Dichloroethane	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,2-Dichloroethane	<0.0054		0.0054	0.00080	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,1-Dichloroethene	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,2-Dichloropropane	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,3-Dichloropropane, Total	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Ethylbenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Methylene Chloride	<0.0054		0.0054	0.0041	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Methyl tert-butyl ether	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Styrene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,1,2,2-Tetrachloroethane	<0.0054		0.0054	0.00086	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Tetrachloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Toluene	<0.0054		0.0054	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
trans-1,2-Dichloroethene	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
trans-1,3-Dichloropropene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,1,1-Trichloroethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
1,1,2-Trichloroethane	<0.0054		0.0054	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Trichloroethene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Vinyl acetate	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Vinyl chloride	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/13/16 09:15	02/20/16 18:33	1
Dibromofluoromethane	105		75 - 120	02/13/16 09:15	02/20/16 18:33	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	02/13/16 09:15	02/20/16 18:33	1
Toluene-d8 (Surr)	109		75 - 122	02/13/16 09:15	02/20/16 18:33	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	☼	02/18/16 07:07	02/25/16 06:11	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Client Sample ID: 3011-78-B02 (0-1)

Lab Sample ID: 500-107558-20

Date Collected: 02/12/16 15:20

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 83.3

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	☼	02/18/16 07:07	02/25/16 06:11	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Acenaphthylene	0.011	J	0.038	0.0051	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Acenaphthene	0.016	J	0.038	0.0069	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Fluorene	0.027	J	0.038	0.0054	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
N-Nitrosodiphenylamine	<0.19		0.19	0.046	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Phenanthrene	0.43		0.038	0.0054	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Anthracene	0.10		0.038	0.0064	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Fluoranthene	0.48		0.038	0.0072	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Pyrene	1.1		0.038	0.0077	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Benzo[a]anthracene	0.28		0.038	0.0052	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Client Sample ID: 3011-78-B02 (0-1)

Lab Sample ID: 500-107558-20

Date Collected: 02/12/16 15:20

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.34		0.038	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Bis(2-ethylhexyl) phthalate	0.088	J	0.19	0.070	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Benzo[b]fluoranthene	0.41		0.038	0.0083	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Benzo[k]fluoranthene	0.24		0.038	0.011	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Benzo[a]pyrene	0.29		0.038	0.0075	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Indeno[1,2,3-cd]pyrene	0.23		0.038	0.010	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Dibenz(a,h)anthracene	0.044		0.038	0.0075	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
Benzo[g,h,i]perylene	0.25		0.038	0.012	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/18/16 07:07	02/25/16 06:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	84		25 - 110	02/18/16 07:07	02/25/16 06:11	1
Phenol-d5	83		31 - 110	02/18/16 07:07	02/25/16 06:11	1
Nitrobenzene-d5	76		25 - 115	02/18/16 07:07	02/25/16 06:11	1
2-Fluorobiphenyl	86		25 - 119	02/18/16 07:07	02/25/16 06:11	1
2,4,6-Tribromophenol	86		35 - 137	02/18/16 07:07	02/25/16 06:11	1
Terphenyl-d14	219	X	36 - 134	02/18/16 07:07	02/25/16 06:11	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Arsenic	2.7		0.58	0.27	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Barium	20		0.58	0.11	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Beryllium	0.20	J	0.23	0.050	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Boron	11		2.9	0.41	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Cadmium	0.094	J	0.12	0.034	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Calcium	150000		120	37	mg/Kg	☼	02/20/16 11:33	02/24/16 17:51	10
Chromium	12		0.58	0.10	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Cobalt	3.3		0.29	0.066	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Copper	15		0.58	0.13	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Iron	10000		120	45	mg/Kg	☼	02/20/16 11:33	02/24/16 17:51	10
Lead	43		0.29	0.14	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Magnesium	88000		58	24	mg/Kg	☼	02/20/16 11:33	02/24/16 17:51	10
Manganese	360		0.58	0.12	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Nickel	8.2		0.58	0.16	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Potassium	580		29	4.7	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Selenium	0.47	J	0.58	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Silver	<0.29		0.29	0.068	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Sodium	1200		58	7.7	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Vanadium	10		0.29	0.085	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1
Zinc	62		1.2	0.37	mg/Kg	☼	02/20/16 11:33	02/24/16 13:52	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.27	J	0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:49	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:22	02/20/16 13:49	1
Boron	0.77		0.50	0.050	mg/L		02/18/16 16:22	02/20/16 13:49	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Client Sample ID: 3011-78-B02 (0-1)

Lab Sample ID: 500-107558-20

Date Collected: 02/12/16 15:20

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 83.3

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		02/18/16 16:22	02/20/16 13:49	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:49	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:49	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:22	02/20/16 13:49	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:22	02/20/16 13:49	1
Manganese	0.53		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:49	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:49	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:22	02/20/16 13:49	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:22	02/20/16 13:49	1
Zinc	0.51	B F1	0.50	0.020	mg/L		02/18/16 16:22	02/20/16 13:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.59		0.025	0.010	mg/L		02/20/16 10:58	02/23/16 08:39	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		02/18/16 16:22	02/19/16 14:38	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:22	02/19/16 14:38	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/18/16 16:45	02/19/16 15:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.017	0.0091	mg/Kg	☼	02/18/16 16:00	02/19/16 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.90		0.200	0.200	SU			02/18/16 23:57	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-8

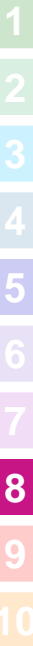
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107558
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
EE		600834-0008-01								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Lab Project #		Sampling		# of Containers		Matrix		Comments		
H298				Date Time		Matrix						
Project Location/State		Lab PM										
Kane County IL		D. Wright										
Sampler												
S. Cooper												
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOC	SVOC	Total TAC Metals	TCUPLSPL TAC Metals	pH/ug Solids	Comments
		3011-76-1301 (0-1)	2-12-16	1575	2 S		X	X	X	X	X	
		3011-76-1312 (0-1)	2-12-16	1520	2 S		X	X	X	X	X	

1920
2021

2-12-16

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: [Signature] Company: EE Date: 2-12-16 Time: 1605

Relinquished By: [Signature] Company: TA Date: 2/12/16 Time: 1815

Relinquished By: _____ Company: _____ Date: _____ Time: _____

Received By: [Signature] Company: TA Date: 2/12/16 Time: 1605

Received By: [Signature] Company: TA Date: 2/13/16 Time: 0900

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: 500-107558-8

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
2N 763 Beth Road ISGS #3011-80 (View Hill Farm)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.906578 Longitude: -88.415945
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.906578 Longitude: -88.415945

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):

Locations 3011-80-B02 through B05 were sampled within the construction zone adjacent to ISGS #3011-80 (View Hill Farm). Refer to PSI Report for ISGS #3011-80 (View Hill Farm) including Table 4-4, and Figures 4-11A&B and 4-12A&B.

- 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 J107509-4.

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:

Neil J. Brown

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-80 (View Hill Farm)				Comparison Criteria			
	BORING	3011-80-B02	3011-80-B03	3011-80-B04	3011-80-B05	MACs		
SAMPLE	3011-80-B02 (0-1)	3011-80-B03 (0-1)	3011-80-B04 (0-1)	3011-80-B05 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	0-1				
pH	8.62	8.95	8.61	8.95				
VOCs (None Detected)								
SVOCs (mg/kg)								
Acenaphthylene	ND U	0.0084 J	0.013 J	0.0079 J	--	--	--	--
Anthracene	ND U	0.023 J	0.016 J	0.015 J	12,000	--	--	--
Benzo[a]anthracene	0.042	0.17	0.11	0.11	0.9	1.8	1.1	--
Benzo[a]pyrene	0.062	0.25 †	0.16 †	0.14 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.11	0.51	0.32	0.26	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.047	0.23	0.13	0.13	--	--	--	--
Benzo[k]fluoranthene	0.056	0.19	0.11	0.11	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.12 J	0.08 J	ND U	ND U	46	--	--	--
Chrysene	0.061	0.27	0.17	0.17	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	ND U	ND U	0.09	0.42	0.2	--
Fluoranthene	0.081	0.32	0.21	0.2	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.03 J	0.16	0.096	0.1	0.9	1.6	0.9	--
Phenanthrene	0.032 J	0.13	0.078	0.1	--	--	--	--
Pyrene	0.15	0.64	0.37	0.38	2,300	--	--	--
Inorganics (mg/kg)								
Arsenic	3.8	4.6	3.6	3.4	11.3	13	--	--
Barium	23	39	22	27	1,500	--	--	--
Beryllium	0.29	0.39	0.24	0.29	22	--	--	--
Boron	8.1	5.9	7	9.4	40	--	--	--
Cadmium	0.056 J	0.15	0.076 J	0.05 J	5.2	--	--	--
Calcium	120,000	110,000	130,000	140,000	--	--	--	--
Chromium	10	12	11	11	21	--	--	--
Cobalt	4.9	6.1	3.7	4.3	20	--	--	--
Copper	12	16	12	11	2,900	--	--	--
Iron	8,800	11,000	7,800	8,300	15,000	15,900	--	--
Lead	29	26	56	32	107	--	--	--
Magnesium	56,000	40,000	73,000	79,000	325,000	--	--	--
Manganese	360	410	280	310	630	636	--	--
Mercury	0.013 J	0.015 J	0.013 J	0.012 J	0.89	--	--	--
Nickel	11	14	9	9.5	100	--	--	--
Potassium	950	900	680	790	--	--	--	--
Selenium	ND U	ND U	0.35 J	ND U	1.3	--	--	--
Sodium	690	1,200	710	660	--	--	--	--
Vanadium	13	16	11	13	550	--	--	--
Zinc	41	58	47	38	5,100	--	--	--
TCLP Metals (mg/L)								
Barium	0.26 J	0.32 J	0.26 J	0.32 J	--	--	--	2
Boron	0.28 J	0.79	0.77	0.1 J	--	--	--	2
Lead	ND U	ND U	0.0079 L	ND U	--	--	--	0.0075
Manganese	0.68 L	1 L	2.1 L	0.83 L	--	--	--	0.15
Zinc	0.33 J	0.23 J	0.47 J	0.44 J	--	--	--	5
SPLP Metals (mg/L)								
Lead	NA	NA	0.091 L	NA	--	--	--	0.0075
Manganese	0.081	0.17 L	0.29 L	0.099	--	--	--	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: 500-107509-4
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

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LINKS

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

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

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

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Job ID: 500-107509-4

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-4

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-80-B05 (0-1) (500-107509-6), 3011-80-B04 (0-1) (500-107509-7), 3011-80-B03 (0-1) (500-107509-8), 3011-80-B02 (0-1) (500-107509-9), 3011-80-B01 (0-1) (500-107509-10), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS) and (500-107509-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-324053 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-80-B05 (0-1) (500-107509-6), 3011-80-B04 (0-1) (500-107509-7), 3011-80-B03 (0-1) (500-107509-8), 3011-80-B02 (0-1) (500-107509-9), 3011-80-B01 (0-1) (500-107509-10) and (500-107509-E-1-D).

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0079	J	0.040	0.0053	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.10		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.20		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.38		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.11		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.17		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.26		0.040	0.0087	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.11		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.14		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.10		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.4		0.60	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	27		0.60	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.24	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	9.4		3.0	0.42	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.050	J	0.12	0.035	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000	B	120	39	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.60	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.3		0.30	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.60	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	8300		12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	32		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	79000	B	60	24	mg/Kg	10	☼	6010B	Total/NA
Manganese	310		0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.5		0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	790		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	660		60	7.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.30	0.088	mg/Kg	1	☼	6010B	Total/NA
Zinc	38		1.2	0.38	mg/Kg	1	☼	6010B	Total/NA
Barium	0.32	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.10	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.83		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.44	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.099		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.021	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.95		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-80-B04 (0-1)

Lab Sample ID: 500-107509-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.013	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.078		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.016	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.21		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.37		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.11		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.17		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.32		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.11		0.037	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B04 (0-1) (Continued)

Lab Sample ID: 500-107509-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.16		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.096		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.6		0.54	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	22		0.54	0.099	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.24		0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	7.0		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.076	J	0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	130000	B	110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.54	0.093	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.7		0.27	0.061	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.54	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7800		11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	56		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	73000	B	54	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	280		0.54	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.0		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	680		27	4.4	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Sodium	710		54	7.1	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.27	0.079	mg/Kg	1	☼	6010B	Total/NA
Zinc	47		1.1	0.34	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.77		0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.0079		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	2.1		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.47	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.091		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.29		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.018	0.0094	mg/Kg	1	☼	7471B	Total/NA
pH	8.61		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-80-B03 (0-1)

Lab Sample ID: 500-107509-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0084	J	0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.023	J	0.041	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.32		0.041	0.0077	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.64		0.041	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.17		0.041	0.0056	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.27		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.080	J	0.21	0.076	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.51		0.041	0.0090	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.19		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.25		0.041	0.0081	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.16		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.23		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.6		0.59	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	39		0.59	0.11	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B03 (0-1) (Continued)

Lab Sample ID: 500-107509-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.39		0.24	0.051	mg/Kg	1	☼	6010B	Total/NA
Boron	5.9		3.0	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15		0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	12	B	0.59	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.1		0.30	0.067	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.59	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	26		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	40000	B	5.9	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	410		0.59	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.59	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	900		30	4.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	1200		59	7.8	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.30	0.086	mg/Kg	1	☼	6010B	Total/NA
Zinc	58		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.32	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.79		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.23	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.17		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.95		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-80-B02 (0-1)

Lab Sample ID: 500-107509-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.032	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.081		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15		0.039	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.042		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.061		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.12	J	0.20	0.072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.056		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.062		0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.030	J	0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.047		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.8		0.58	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	23		0.58	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.23	0.050	mg/Kg	1	☼	6010B	Total/NA
Boron	8.1		2.9	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.056	J	0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	120	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	10	B	0.58	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.9		0.29	0.066	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.58	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	8800		12	4.5	mg/Kg	1	☼	6010B	Total/NA
Lead	29		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	56000	B	5.8	2.4	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B02 (0-1) (Continued)

Lab Sample ID: 500-107509-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	360		0.58	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	11		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	950		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Silver	0.20	J ^	0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Sodium	690		58	7.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.29	0.085	mg/Kg	1	☼	6010B	Total/NA
Zinc	41		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.28	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.68		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.33	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.081		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.018	0.0093	mg/Kg	1	☼	7471B	Total/NA
pH	8.62		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-6	3011-80-B05 (0-1)	Solid	02/11/16 14:40	02/12/16 07:55
500-107509-7	3011-80-B04 (0-1)	Solid	02/11/16 14:50	02/12/16 07:55
500-107509-8	3011-80-B03 (0-1)	Solid	02/11/16 14:55	02/12/16 07:55
500-107509-9	3011-80-B02 (0-1)	Solid	02/11/16 15:00	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.026		0.026	0.0051	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Benzene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Bromodichloromethane	<0.0066		0.0066	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Bromoform	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Bromomethane	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
2-Butanone (MEK)	<0.0066		0.0066	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Carbon disulfide	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Carbon tetrachloride	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chlorobenzene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chloroethane	<0.0066		0.0066	0.0028	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chloroform	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chloromethane	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
cis-1,2-Dichloroethene	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
cis-1,3-Dichloropropene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Dibromochloromethane	<0.0066		0.0066	0.00075	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1-Dichloroethane	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,2-Dichloroethane	<0.0066		0.0066	0.00097	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1-Dichloroethene	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,2-Dichloropropane	<0.0066		0.0066	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,3-Dichloropropane, Total	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Ethylbenzene	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
2-Hexanone	<0.0066		0.0066	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Methylene Chloride	<0.0066		0.0066	0.0050	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
4-Methyl-2-pentanone (MIBK)	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Methyl tert-butyl ether	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Styrene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1,2,2-Tetrachloroethane	<0.0066		0.0066	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Tetrachloroethene	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Toluene	<0.0066		0.0066	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
trans-1,2-Dichloroethene	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
trans-1,3-Dichloropropene	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1,1-Trichloroethane	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1,2-Trichloroethane	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Trichloroethene	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Vinyl acetate	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Vinyl chloride	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Xylenes, Total	<0.013		0.013	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 122	02/12/16 09:20	02/18/16 18:04	1
Dibromofluoromethane	95		75 - 120	02/12/16 09:20	02/18/16 18:04	1
1,2-Dichloroethane-d4 (Surr)	86		70 - 134	02/12/16 09:20	02/18/16 18:04	1
Toluene-d8 (Surr)	101		75 - 122	02/12/16 09:20	02/18/16 18:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.090	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
1,3-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
N-Nitrosodi-n-propylamine	<0.082		0.082	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachloroethane	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachlorobutadiene	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dichlorophenol	<0.40		0.40	0.096	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Chloroaniline	<0.82		0.82	0.19	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachlorocyclopentadiene	<0.82		0.82	0.23	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Methylnaphthalene	<0.040		0.040	0.0074	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Chloronaphthalene	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,6-Dinitrotoluene	<0.20		0.20	0.080	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Nitrophenol	<0.40		0.40	0.096	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dinitrophenol	<0.82		0.82	0.71	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Acenaphthylene	0.0079	J	0.040	0.0053	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Acenaphthene	<0.040		0.040	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Nitrophenol	<0.82		0.82	0.39	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachlorobenzene	<0.082		0.082	0.0094	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Diethyl phthalate	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Pentachlorophenol	<0.82		0.82	0.65	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4,6-Dinitro-2-methylphenol	<0.82		0.82	0.33	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Phenanthrene	0.10		0.040	0.0056	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Anthracene	0.015	J	0.040	0.0068	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Fluoranthene	0.20		0.040	0.0075	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Pyrene	0.38		0.040	0.0080	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Butyl benzyl phthalate	<0.20		0.20	0.077	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[a]anthracene	0.11		0.040	0.0054	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.17		0.040	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.057	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[b]fluoranthene	0.26		0.040	0.0087	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[k]fluoranthene	0.11		0.040	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[a]pyrene	0.14		0.040	0.0078	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Indeno[1,2,3-cd]pyrene	0.10		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0078	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[g,h,i]perylene	0.13		0.040	0.013	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
3 & 4 Methylphenol	<0.20		0.20	0.068	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	99		25 - 110	02/16/16 07:05	02/23/16 22:45	1
Phenol-d5	92		31 - 110	02/16/16 07:05	02/23/16 22:45	1
Nitrobenzene-d5	81		25 - 115	02/16/16 07:05	02/23/16 22:45	1
2-Fluorobiphenyl	76		25 - 119	02/16/16 07:05	02/23/16 22:45	1
2,4,6-Tribromophenol	53		35 - 137	02/16/16 07:05	02/23/16 22:45	1
Terphenyl-d14	183	X	36 - 134	02/16/16 07:05	02/23/16 22:45	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Arsenic	3.4		0.60	0.28	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Barium	27		0.60	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Beryllium	0.29		0.24	0.052	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Boron	9.4		3.0	0.42	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Cadmium	0.050	J	0.12	0.035	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Calcium	140000	B	120	39	mg/Kg	☼	02/17/16 15:16	02/22/16 23:18	10
Chromium	11	B	0.60	0.10	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1
Cobalt	4.3		0.30	0.068	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Copper	11		0.60	0.13	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1
Iron	8300		12	4.6	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Lead	32		0.30	0.15	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Magnesium	79000	B	60	24	mg/Kg	☼	02/17/16 15:16	02/22/16 23:18	10
Manganese	310		0.60	0.12	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Nickel	9.5		0.60	0.16	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Potassium	790		30	4.9	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Selenium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Silver	<0.30	^	0.30	0.070	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Sodium	660		60	7.9	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Vanadium	13		0.30	0.088	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1
Zinc	38		1.2	0.38	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.32	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:25	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 13:25	1
Boron	0.10	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:25	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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	-	02/16/16 14:27	02/21/16 13:25	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Iron	<0.40		0.40	0.20	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Manganese	0.83		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Silver	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Zinc	0.44	J	0.50	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.099		0.025	0.010	mg/L	-	02/17/16 08:31	02/20/16 00:49	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	-	02/16/16 14:27	02/17/16 20:56	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/16/16 14:27	02/17/16 20:56	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/17/16 16:15	02/18/16 11:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.021	0.011	mg/Kg	☼	02/18/16 16:00	02/19/16 10:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.95		0.200	0.200	SU	-		02/13/16 10:47	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B04 (0-1)

Lab Sample ID: 500-107509-7

Date Collected: 02/11/16 14:50

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Bromoform	<0.0045		0.0045	0.00092	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Carbon disulfide	<0.0045		0.0045	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Carbon tetrachloride	<0.0045		0.0045	0.00097	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Chloroform	<0.0045		0.0045	0.00088	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00092	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,1-Dichloroethane	<0.0045		0.0045	0.00093	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,2-Dichloroethane	<0.0045		0.0045	0.00067	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,3-Dichloropropane, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00093	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Styrene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,1,1,2-Tetrachloroethane	<0.0045		0.0045	0.00072	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Tetrachloroethene	<0.0045		0.0045	0.00094	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00088	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 122	02/12/16 09:20	02/18/16 18:29	1
Dibromofluoromethane	94		75 - 120	02/12/16 09:20	02/18/16 18:29	1
1,2-Dichloroethane-d4 (Surr)	85		70 - 134	02/12/16 09:20	02/18/16 18:29	1
Toluene-d8 (Surr)	104		75 - 122	02/12/16 09:20	02/18/16 18:29	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	☼	02/16/16 07:05	02/23/16 01:33	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B04 (0-1)

Lab Sample ID: 500-107509-7

Date Collected: 02/11/16 14:50

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 87.0

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	☼	02/16/16 07:05	02/23/16 01:33	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Acenaphthylene	0.013	J	0.037	0.0049	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Phenanthrene	0.078		0.037	0.0052	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Anthracene	0.016	J	0.037	0.0062	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Fluoranthene	0.21		0.037	0.0069	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Pyrene	0.37		0.037	0.0074	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Benzo[a]anthracene	0.11		0.037	0.0050	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B04 (0-1)

Lab Sample ID: 500-107509-7

Date Collected: 02/11/16 14:50

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.17		0.037	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Benzo[b]fluoranthene	0.32		0.037	0.0080	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Benzo[k]fluoranthene	0.11		0.037	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Benzo[a]pyrene	0.16		0.037	0.0072	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Indeno[1,2,3-cd]pyrene	0.096		0.037	0.0096	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
Benzo[g,h,i]perylene	0.13		0.037	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 01:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	115	X	25 - 110	02/16/16 07:05	02/23/16 01:33	1
Phenol-d5	109		31 - 110	02/16/16 07:05	02/23/16 01:33	1
Nitrobenzene-d5	95		25 - 115	02/16/16 07:05	02/23/16 01:33	1
2-Fluorobiphenyl	89		25 - 119	02/16/16 07:05	02/23/16 01:33	1
2,4,6-Tribromophenol	108		35 - 137	02/16/16 07:05	02/23/16 01:33	1
Terphenyl-d14	219	X	36 - 134	02/16/16 07:05	02/23/16 01:33	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	☼	02/17/16 15:16	02/22/16 21:40	1
Arsenic	3.6		0.54	0.25	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Barium	22		0.54	0.099	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Beryllium	0.24		0.22	0.047	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Boron	7.0		2.7	0.38	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Cadmium	0.076	J	0.11	0.031	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Calcium	130000	B	110	35	mg/Kg	☼	02/17/16 15:16	02/22/16 23:22	10
Chromium	11	B	0.54	0.093	mg/Kg	☼	02/17/16 15:16	02/23/16 15:10	1
Cobalt	3.7		0.27	0.061	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Copper	12		0.54	0.12	mg/Kg	☼	02/17/16 15:16	02/23/16 15:10	1
Iron	7800		11	4.2	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Lead	56		0.27	0.13	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Magnesium	73000	B	54	22	mg/Kg	☼	02/17/16 15:16	02/22/16 23:22	10
Manganese	280		0.54	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Nickel	9.0		0.54	0.15	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Potassium	680		27	4.4	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Selenium	0.35	J	0.54	0.27	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Silver	<0.27	^	0.27	0.063	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Sodium	710		54	7.1	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	02/17/16 15:16	02/22/16 21:40	1
Vanadium	11		0.27	0.079	mg/Kg	☼	02/17/16 15:16	02/23/16 15:10	1
Zinc	47		1.1	0.34	mg/Kg	☼	02/17/16 15:16	02/23/16 15:10	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		02/16/16 14:27	02/21/16 13:32	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 13:32	1
Boron	0.77		0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:32	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B04 (0-1)

Lab Sample ID: 500-107509-7

Date Collected: 02/11/16 14:50

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 87.0

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		02/16/16 14:27	02/21/16 13:32	1
Chromium	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:32	1
Cobalt	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:32	1
Iron	<0.40		0.40	0.20	mg/L		02/16/16 14:27	02/21/16 13:32	1
Lead	0.0079		0.0075	0.0075	mg/L		02/16/16 14:27	02/21/16 13:32	1
Manganese	2.1		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:32	1
Nickel	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:32	1
Selenium	<0.050		0.050	0.020	mg/L		02/16/16 14:27	02/21/16 13:32	1
Silver	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:32	1
Zinc	0.47	J	0.50	0.020	mg/L		02/16/16 14:27	02/21/16 13:32	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.091		0.0075	0.0075	mg/L		02/17/16 08:31	02/20/16 00:56	1
Manganese	0.29		0.025	0.010	mg/L		02/17/16 08:31	02/20/16 00:56	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		02/16/16 14:27	02/17/16 21:00	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/16/16 14:27	02/17/16 21:00	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 11:39	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	J	0.018	0.0094	mg/Kg	☼	02/18/16 16:00	02/19/16 10:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.61		0.200	0.200	SU			02/13/16 10:52	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B03 (0-1)

Lab Sample ID: 500-107509-8

Date Collected: 02/11/16 14:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.024		0.024	0.0046	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Benzene	<0.0060		0.0060	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Bromodichloromethane	<0.0060		0.0060	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Bromoform	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Bromomethane	<0.0060		0.0060	0.0022	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
2-Butanone (MEK)	<0.0060		0.0060	0.0021	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Carbon disulfide	<0.0060		0.0060	0.0022	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Carbon tetrachloride	<0.0060		0.0060	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Chlorobenzene	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Chloroethane	<0.0060		0.0060	0.0025	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Chloroform	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Chloromethane	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
cis-1,2-Dichloroethene	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
cis-1,3-Dichloropropene	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Dibromochloromethane	<0.0060		0.0060	0.00069	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,1-Dichloroethane	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,2-Dichloroethane	<0.0060		0.0060	0.00088	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,1-Dichloroethene	<0.0060		0.0060	0.0022	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,2-Dichloropropane	<0.0060		0.0060	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,3-Dichloropropane, Total	<0.0060		0.0060	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Ethylbenzene	<0.0060		0.0060	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
2-Hexanone	<0.0060		0.0060	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Methylene Chloride	<0.0060		0.0060	0.0045	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
4-Methyl-2-pentanone (MIBK)	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Methyl tert-butyl ether	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Styrene	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,1,2,2-Tetrachloroethane	<0.0060		0.0060	0.00095	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Tetrachloroethene	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Toluene	<0.0060		0.0060	0.0021	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
trans-1,2-Dichloroethene	<0.0060		0.0060	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
trans-1,3-Dichloropropene	<0.0060		0.0060	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,1,1-Trichloroethane	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
1,1,2-Trichloroethane	<0.0060		0.0060	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Trichloroethene	<0.0060		0.0060	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Vinyl acetate	<0.0060		0.0060	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Vinyl chloride	<0.0060		0.0060	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1
Xylenes, Total	<0.012		0.012	0.0022	mg/Kg	☼	02/12/16 09:20	02/18/16 18:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 122	02/12/16 09:20	02/18/16 18:54	1
Dibromofluoromethane	94		75 - 120	02/12/16 09:20	02/18/16 18:54	1
1,2-Dichloroethane-d4 (Surr)	86		70 - 134	02/12/16 09:20	02/18/16 18:54	1
Toluene-d8 (Surr)	102		75 - 122	02/12/16 09:20	02/18/16 18:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B03 (0-1)

Lab Sample ID: 500-107509-8

Date Collected: 02/11/16 14:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2-Methylphenol	<0.21		0.21	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
N-Nitrosodi-n-propylamine	<0.084		0.084	0.051	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Naphthalene	<0.041		0.041	0.0064	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,4-Dichlorophenol	<0.41		0.41	0.099	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4-Chloroaniline	<0.84		0.84	0.20	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,4,5-Trichlorophenol	<0.41		0.41	0.095	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Hexachlorocyclopentadiene	<0.84		0.84	0.24	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2-Methylnaphthalene	<0.041		0.041	0.0077	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,6-Dinitrotoluene	<0.21		0.21	0.082	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2-Nitrophenol	<0.41		0.41	0.098	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,4-Dinitrophenol	<0.84		0.84	0.73	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Acenaphthylene	0.0084	J	0.041	0.0055	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
2,4-Dinitrotoluene	<0.21		0.21	0.066	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Acenaphthene	<0.041		0.041	0.0075	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4-Nitrophenol	<0.84		0.84	0.40	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Fluorene	<0.041		0.041	0.0059	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Hexachlorobenzene	<0.084		0.084	0.0097	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Diethyl phthalate	<0.21		0.21	0.071	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Pentachlorophenol	<0.84		0.84	0.67	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
4,6-Dinitro-2-methylphenol	<0.84		0.84	0.33	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Phenanthrene	0.13		0.041	0.0058	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Anthracene	0.023	J	0.041	0.0070	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Fluoranthene	0.32		0.041	0.0077	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Pyrene	0.64		0.041	0.0083	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Butyl benzyl phthalate	<0.21		0.21	0.079	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Benzo[a]anthracene	0.17		0.041	0.0056	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B03 (0-1)

Lab Sample ID: 500-107509-8

Date Collected: 02/11/16 14:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.27		0.041	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Bis(2-ethylhexyl) phthalate	0.080	J	0.21	0.076	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Di-n-octyl phthalate	<0.21		0.21	0.068	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Benzo[b]fluoranthene	0.51		0.041	0.0090	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Benzo[k]fluoranthene	0.19		0.041	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Benzo[a]pyrene	0.25		0.041	0.0081	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Indeno[1,2,3-cd]pyrene	0.16		0.041	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0080	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
Benzo[g,h,i]perylene	0.23		0.041	0.013	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/16/16 07:05	02/23/16 01:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	106		25 - 110	02/16/16 07:05	02/23/16 01:59	1
Phenol-d5	104		31 - 110	02/16/16 07:05	02/23/16 01:59	1
Nitrobenzene-d5	87		25 - 115	02/16/16 07:05	02/23/16 01:59	1
2-Fluorobiphenyl	83		25 - 119	02/16/16 07:05	02/23/16 01:59	1
2,4,6-Tribromophenol	91		35 - 137	02/16/16 07:05	02/23/16 01:59	1
Terphenyl-d14	205	X	36 - 134	02/16/16 07:05	02/23/16 01:59	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Arsenic	4.6		0.59	0.27	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Barium	39		0.59	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Beryllium	0.39		0.24	0.051	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Boron	5.9		3.0	0.41	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Cadmium	0.15		0.12	0.034	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Calcium	110000	B	120	38	mg/Kg	☼	02/17/16 15:16	02/22/16 23:26	10
Chromium	12	B	0.59	0.10	mg/Kg	☼	02/17/16 15:16	02/23/16 15:15	1
Cobalt	6.1		0.30	0.067	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Copper	16		0.59	0.13	mg/Kg	☼	02/17/16 15:16	02/23/16 15:15	1
Iron	11000		12	4.6	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Lead	26		0.30	0.15	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Magnesium	40000	B	5.9	2.4	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Manganese	410		0.59	0.12	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Nickel	14		0.59	0.16	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Potassium	900		30	4.8	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Selenium	<0.59		0.59	0.29	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Silver	<0.30	^	0.30	0.069	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Sodium	1200		59	7.8	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	02/17/16 15:16	02/22/16 21:45	1
Vanadium	16		0.30	0.086	mg/Kg	☼	02/17/16 15:16	02/23/16 15:15	1
Zinc	58		1.2	0.37	mg/Kg	☼	02/17/16 15:16	02/23/16 15:15	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.32	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:39	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 13:39	1
Boron	0.79		0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B03 (0-1)

Lab Sample ID: 500-107509-8

Date Collected: 02/11/16 14:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.5

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		02/16/16 14:27	02/21/16 13:39	1
Chromium	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:39	1
Cobalt	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:39	1
Iron	<0.40		0.40	0.20	mg/L		02/16/16 14:27	02/21/16 13:39	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/16/16 14:27	02/21/16 13:39	1
Manganese	1.0		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:39	1
Nickel	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:39	1
Selenium	<0.050		0.050	0.020	mg/L		02/16/16 14:27	02/21/16 13:39	1
Silver	<0.025		0.025	0.010	mg/L		02/16/16 14:27	02/21/16 13:39	1
Zinc	0.23	J	0.50	0.020	mg/L		02/16/16 14:27	02/21/16 13:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.17		0.025	0.010	mg/L		02/17/16 08:31	02/20/16 01:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/16/16 14:27	02/17/16 21:04	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/16/16 14:27	02/17/16 21:04	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 11:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 10:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.95		0.200	0.200	SU			02/13/16 10:54	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B02 (0-1)

Lab Sample ID: 500-107509-9

Date Collected: 02/11/16 15:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.039		0.039	0.0075	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Benzene	<0.0097		0.0097	0.0022	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Bromodichloromethane	<0.0097		0.0097	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Bromoform	<0.0097		0.0097	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Bromomethane	<0.0097		0.0097	0.0036	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
2-Butanone (MEK)	<0.0097		0.0097	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Carbon disulfide	<0.0097		0.0097	0.0036	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Carbon tetrachloride	<0.0097		0.0097	0.0021	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Chlorobenzene	<0.0097		0.0097	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Chloroethane	<0.0097		0.0097	0.0041	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Chloroform	<0.0097		0.0097	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Chloromethane	<0.0097		0.0097	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
cis-1,2-Dichloroethene	<0.0097		0.0097	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
cis-1,3-Dichloropropene	<0.0097		0.0097	0.0022	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Dibromochloromethane	<0.0097		0.0097	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,1-Dichloroethane	<0.0097		0.0097	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,2-Dichloroethane	<0.0097		0.0097	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,1-Dichloroethene	<0.0097		0.0097	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,2-Dichloropropane	<0.0097		0.0097	0.0025	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,3-Dichloropropene, Total	<0.0097		0.0097	0.0027	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Ethylbenzene	<0.0097		0.0097	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
2-Hexanone	<0.0097		0.0097	0.0030	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Methylene Chloride	<0.0097		0.0097	0.0073	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
4-Methyl-2-pentanone (MIBK)	<0.0097		0.0097	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Methyl tert-butyl ether	<0.0097		0.0097	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Styrene	<0.0097		0.0097	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,1,2,2-Tetrachloroethane	<0.0097		0.0097	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Tetrachloroethene	<0.0097		0.0097	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Toluene	<0.0097		0.0097	0.0034	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
trans-1,2-Dichloroethene	<0.0097		0.0097	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
trans-1,3-Dichloropropene	<0.0097		0.0097	0.0027	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,1,1-Trichloroethane	<0.0097		0.0097	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
1,1,2-Trichloroethane	<0.0097		0.0097	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Trichloroethene	<0.0097		0.0097	0.0026	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Vinyl acetate	<0.0097		0.0097	0.0026	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Vinyl chloride	<0.0097		0.0097	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2
Xylenes, Total	<0.019		0.019	0.0036	mg/Kg	☼	02/12/16 09:20	02/18/16 19:20	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 122	02/12/16 09:20	02/18/16 19:20	2
Dibromofluoromethane	96		75 - 120	02/12/16 09:20	02/18/16 19:20	2
1,2-Dichloroethane-d4 (Surr)	87		70 - 134	02/12/16 09:20	02/18/16 19:20	2
Toluene-d8 (Surr)	103		75 - 122	02/12/16 09:20	02/18/16 19:20	2

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	☼	02/16/16 07:05	02/23/16 02:25	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B02 (0-1)

Lab Sample ID: 500-107509-9

Date Collected: 02/11/16 15:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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	☼	02/16/16 07:05	02/23/16 02:25	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2-Methylnaphthalene	<0.039		0.039	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Pentachlorophenol	<0.80		0.80	0.63	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Phenanthrene	0.032	J	0.039	0.0055	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Anthracene	<0.039		0.039	0.0066	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Fluoranthene	0.081		0.039	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Pyrene	0.15		0.039	0.0079	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Benzo[a]anthracene	0.042		0.039	0.0053	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B02 (0-1)

Lab Sample ID: 500-107509-9

Date Collected: 02/11/16 15:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.061		0.039	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Bis(2-ethylhexyl) phthalate	0.12	J	0.20	0.072	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Benzo[b]fluoranthene	0.11		0.039	0.0085	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Benzo[k]fluoranthene	0.056		0.039	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Benzo[a]pyrene	0.062		0.039	0.0077	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Indeno[1,2,3-cd]pyrene	0.030	J	0.039	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
Benzo[g,h,i]perylene	0.047		0.039	0.013	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:05	02/23/16 02:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	93		25 - 110	02/16/16 07:05	02/23/16 02:25	1
Phenol-d5	88		31 - 110	02/16/16 07:05	02/23/16 02:25	1
Nitrobenzene-d5	78		25 - 115	02/16/16 07:05	02/23/16 02:25	1
2-Fluorobiphenyl	72		25 - 119	02/16/16 07:05	02/23/16 02:25	1
2,4,6-Tribromophenol	60		35 - 137	02/16/16 07:05	02/23/16 02:25	1
Terphenyl-d14	172	X	36 - 134	02/16/16 07:05	02/23/16 02:25	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Arsenic	3.8		0.58	0.27	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Barium	23		0.58	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Beryllium	0.29		0.23	0.050	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Boron	8.1		2.9	0.41	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Cadmium	0.056	J	0.12	0.034	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Calcium	120000	B	120	37	mg/Kg	☼	02/17/16 15:16	02/22/16 23:30	10
Chromium	10	B	0.58	0.10	mg/Kg	☼	02/17/16 15:16	02/23/16 15:28	1
Cobalt	4.9		0.29	0.066	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Copper	12		0.58	0.13	mg/Kg	☼	02/17/16 15:16	02/23/16 15:28	1
Iron	8800		12	4.5	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Lead	29		0.29	0.14	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Magnesium	56000	B	5.8	2.4	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Manganese	360		0.58	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Nickel	11		0.58	0.16	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Potassium	950		29	4.7	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Selenium	<0.58		0.58	0.29	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Silver	0.20	J ^	0.29	0.068	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Sodium	690		58	7.7	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	02/17/16 15:16	02/22/16 21:50	1
Vanadium	13		0.29	0.085	mg/Kg	☼	02/17/16 15:16	02/23/16 15:28	1
Zinc	41		1.2	0.37	mg/Kg	☼	02/17/16 15:16	02/23/16 15:28	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		02/16/16 14:27	02/21/16 13:46	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 13:46	1
Boron	0.28	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:46	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B02 (0-1)

Lab Sample ID: 500-107509-9

Date Collected: 02/11/16 15:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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	-	02/16/16 14:27	02/21/16 13:46	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Iron	<0.40		0.40	0.20	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Manganese	0.68		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Silver	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:46	1
Zinc	0.33	J	0.50	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.081		0.025	0.010	mg/L	-	02/17/16 08:31	02/20/16 01:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L	-	02/16/16 14:27	02/17/16 21:08	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/16/16 14:27	02/17/16 21:08	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/17/16 16:15	02/18/16 11:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	J	0.018	0.0093	mg/Kg	☼	02/18/16 16:00	02/19/16 10:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.62		0.200	0.200	SU	-		02/13/16 10:56	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Qualifiers

GC/MS Semi VOA

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

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

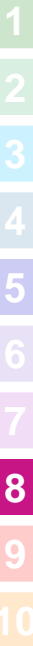
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Sampler		Lab Project #		Lab PM		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
EE		10093410005-01						S. Cooper		5011864		P. Wright		
Project Name		Project Location/State		# of Containers		Matrix		Date		Time		Comments		
6	MS/MSD	3011-80-B05 (01)	2/11/16	1440	2	S	Voc	X	X	X	X	X		
7		3011-80-B04 (01)	2/11/16	1450	2	S	Succ	X	X	X	X	X		
8		3011-80-B03 (01)	2/11/16	1455	2	S	Tot H/TAC	X	X	X	X	X		
9		3011-80-B02 (01)	2/11/16	1500	2	S	TUP/SPP/TAC (ml)	X	X	X	X	X		
10		3011-80-B01 (01)	2/11/16	1570	2	S	P4/10/5/L	X	X	X	X	X		
2/11/16														

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>CE</u>	Date: <u>2/11/16</u>	Time: <u>1600</u>	Received By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>2/11/16</u>	Time: <u>1600</u>
Relinquished By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>2/11/16</u>	Time: <u>1735</u>	Received By: <u>[Signature]</u>	Company: <u>TA-CART</u>	Date: <u>2/12/16</u>	Time: <u>0755</u>

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

Matrix Key

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-4

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
41W 183 IL 38 and 2N 651 Beth Road ISGS #3011-81 (Residences)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.90631504 Longitude: -88.41728225
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90631504 Longitude: -88.41728225

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 3011-81-B01 was sampled within the construction zone adjacent to ISGS #3011-81 (Residences). Refer to PSI Report for ISGS #3011-81 (Residences) including Table 4-4, and Figures 4-11A&B.

- 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 J107558-9.

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

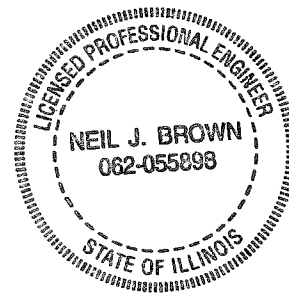
Printed Name:

Neil J. Brown

3/17/16

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-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-81 (Residences)	Comparison Criteria			
BORING	3011-81-B01	MACs			TACO
SAMPLE	3011-81-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.76				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	0.013 J	570	--	--	--
Anthracene	0.027 J	12,000	--	--	--
Benzo[a]anthracene	0.18	0.9	1.8	1.1	--
Benzo[a]pyrene	0.22 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.46	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.13	--	--	--	--
Benzo[k]fluoranthene	0.15	9	--	--	--
Chrysene	0.25	88	--	--	--
Dibenzo(a,h)anthracene	0.037 J	0.09	0.42	0.2	--
Fluoranthene	0.56	3,100	--	--	--
Fluorene	0.015 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.12	0.9	1.6	0.9	--
Phenanthrene	0.29	--	--	--	--
Pyrene	0.48	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	2	11.3	13	--	--
Barium	17	1,500	--	--	--
Beryllium	0.21 J	22	--	--	--
Boron	8.8	40	--	--	--
Cadmium	0.12	5.2	--	--	--
Calcium	140,000	--	--	--	--
Chromium	34 †	21	--	--	--
Cobalt	5.9	20	--	--	--
Copper	9.2	2,900	--	--	--
Iron	11,000	15,000	15,900	--	--
Lead	180 †	107	--	--	--
Magnesium	86,000	325,000	--	--	--
Manganese	280	630	636	--	--
Mercury	0.015 J	0.89	--	--	--
Nickel	12	100	--	--	--
Potassium	520	--	--	--	--
Selenium	0.48 J	1.3	--	--	--
Sodium	490	--	--	--	--
Vanadium	10	550	--	--	--
Zinc	49	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.21 J	--	--	--	2
Boron	0.88	--	--	--	2
Chromium	ND U	--	--	--	0.1
Iron	0.25 J	--	--	--	5
Lead	ND U	--	--	--	0.0075
Manganese	0.038	--	--	--	0.15
Zinc	1	--	--	--	5
SPLP Metals (Not Analyzed)					

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107558-9
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:23:07 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for
Richard Wright, Senior Project Manager
(708)534-5200
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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Client Sample Results	6
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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Job ID: 500-107558-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-9

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The instrument blank for analytical batch 500-323716 contained Iron greater than the reporting limit (RL), and were not reanalyzed because the laboratory blank (LB), and bracketing continuing calibration blank (CCB) solutions all had results below the RL. The data have been qualified and reported.

Method(s) 6010B: The method blank for preparation batch 500-323727 and analytical batch 500-324314 contained Calcium above the reporting limit (RL). Associated sample 3011-81-B01 (0-1) (500-107558-21) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Client Sample ID: 3011-81-B01 (0-1)

Lab Sample ID: 500-107558-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.013	J	0.040	0.0072	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.015	J	0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.29		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.027	J	0.040	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.56		0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.48		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.18		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.25		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.46		0.040	0.0086	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.15		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.22		0.040	0.0077	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.12		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.037	J	0.040	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.0		0.59	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	17		0.59	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.21	J	0.24	0.051	mg/Kg	1	☼	6010B	Total/NA
Boron	8.8		2.9	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.12		0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000		120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	34		0.59	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.9		0.29	0.067	mg/Kg	1	☼	6010B	Total/NA
Copper	9.2		0.59	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		120	45	mg/Kg	10	☼	6010B	Total/NA
Lead	180		0.29	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	86000		59	24	mg/Kg	10	☼	6010B	Total/NA
Manganese	280		0.59	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.59	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		29	4.8	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.48	J	0.59	0.29	mg/Kg	1	☼	6010B	Total/NA
Sodium	490		59	7.8	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.29	0.086	mg/Kg	1	☼	6010B	Total/NA
Zinc	49		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.21	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.88		0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.25	J ^	0.40	0.20	mg/L	1		6010B	TCLP
Manganese	0.038		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	1.0		0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.015	J	0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.76		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-21	3011-81-B01 (0-1)	Solid	02/12/16 15:30	02/13/16 08:00

1

2

3

4

5

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10

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Client Sample ID: 3011-81-B01 (0-1)

Lab Sample ID: 500-107558-21

Date Collected: 02/12/16 15:30

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0043	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Benzene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Bromodichloromethane	<0.0055		0.0055	0.00093	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Bromoform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Bromomethane	<0.0055	*	0.0055	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
2-Butanone (MEK)	<0.0055		0.0055	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Carbon disulfide	<0.0055		0.0055	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Carbon tetrachloride	<0.0055		0.0055	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Chlorobenzene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Chloroethane	<0.0055	*	0.0055	0.0023	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Chloroform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Chloromethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
cis-1,2-Dichloroethene	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
cis-1,3-Dichloropropene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Dibromochloromethane	<0.0055		0.0055	0.00063	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,1-Dichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,2-Dichloroethane	<0.0055		0.0055	0.00081	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,1-Dichloroethene	<0.0055		0.0055	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,2-Dichloropropane	<0.0055		0.0055	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,3-Dichloropropane, Total	<0.0055		0.0055	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Ethylbenzene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
2-Hexanone	<0.0055		0.0055	0.0017	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Methylene Chloride	<0.0055		0.0055	0.0042	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
4-Methyl-2-pentanone (MIBK)	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Methyl tert-butyl ether	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Styrene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,1,2,2-Tetrachloroethane	<0.0055		0.0055	0.00087	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Tetrachloroethene	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Toluene	<0.0055		0.0055	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
trans-1,2-Dichloroethene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
trans-1,3-Dichloropropene	<0.0055		0.0055	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,1,1-Trichloroethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
1,1,2-Trichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Trichloroethene	<0.0055		0.0055	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Vinyl acetate	<0.0055		0.0055	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Vinyl chloride	<0.0055		0.0055	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 02:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/13/16 09:15	02/20/16 02:40	1
Dibromofluoromethane	107		75 - 120	02/13/16 09:15	02/20/16 02:40	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	02/13/16 09:15	02/20/16 02:40	1
Toluene-d8 (Surr)	110		75 - 122	02/13/16 09:15	02/20/16 02:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.089	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Client Sample ID: 3011-81-B01 (0-1)

Lab Sample ID: 500-107558-21

Date Collected: 02/12/16 15:30

Matrix: Solid

Date Received: 02/13/16 08:00

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	0.048	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2-Methylnaphthalene	<0.040		0.040	0.0074	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Acenaphthene	0.013	J	0.040	0.0072	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Fluorene	0.015	J	0.040	0.0056	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Pentachlorophenol	<0.81		0.81	0.64	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Phenanthrene	0.29		0.040	0.0056	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Anthracene	0.027	J	0.040	0.0067	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Fluoranthene	0.56		0.040	0.0074	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Pyrene	0.48		0.040	0.0080	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Benzo[a]anthracene	0.18		0.040	0.0054	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Client Sample ID: 3011-81-B01 (0-1)

Lab Sample ID: 500-107558-21

Date Collected: 02/12/16 15:30

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.25		0.040	0.011	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Benzo[b]fluoranthene	0.46		0.040	0.0086	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Benzo[k]fluoranthene	0.15		0.040	0.012	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Benzo[a]pyrene	0.22		0.040	0.0077	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Indeno[1,2,3-cd]pyrene	0.12		0.040	0.010	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Dibenz(a,h)anthracene	0.037	J	0.040	0.0077	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
Benzo[g,h,i]perylene	0.13		0.040	0.013	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	02/17/16 07:25	02/25/16 14:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	87		25 - 110	02/17/16 07:25	02/25/16 14:08	1
Phenol-d5	89		31 - 110	02/17/16 07:25	02/25/16 14:08	1
Nitrobenzene-d5	81		25 - 115	02/17/16 07:25	02/25/16 14:08	1
2-Fluorobiphenyl	77		25 - 119	02/17/16 07:25	02/25/16 14:08	1
2,4,6-Tribromophenol	100		35 - 137	02/17/16 07:25	02/25/16 14:08	1
Terphenyl-d14	110		36 - 134	02/17/16 07:25	02/25/16 14:08	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Arsenic	2.0		0.59	0.27	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Barium	17		0.59	0.11	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Beryllium	0.21	J	0.24	0.051	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Boron	8.8		2.9	0.41	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Cadmium	0.12		0.12	0.034	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Calcium	140000		120	38	mg/Kg	☼	02/20/16 11:33	02/24/16 17:55	10
Chromium	34		0.59	0.10	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Cobalt	5.9		0.29	0.067	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Copper	9.2		0.59	0.13	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Iron	11000		120	45	mg/Kg	☼	02/20/16 11:33	02/24/16 17:55	10
Lead	180		0.29	0.15	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Magnesium	86000		59	24	mg/Kg	☼	02/20/16 11:33	02/24/16 17:55	10
Manganese	280		0.59	0.12	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Nickel	12		0.59	0.16	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Potassium	520		29	4.8	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Selenium	0.48	J	0.59	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Silver	<0.29		0.29	0.069	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Sodium	490		59	7.8	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Vanadium	10		0.29	0.086	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1
Zinc	49		1.2	0.37	mg/Kg	☼	02/20/16 11:33	02/24/16 13:57	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.21	J	0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:22	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:26	02/19/16 23:22	1
Boron	0.88		0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:22	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Client Sample ID: 3011-81-B01 (0-1)

Lab Sample ID: 500-107558-21

Date Collected: 02/12/16 15:30

Matrix: Solid

Date Received: 02/13/16 08:00

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		02/18/16 16:26	02/19/16 23:22	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:22	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:22	1
Iron	0.25	J ^	0.40	0.20	mg/L		02/18/16 16:26	02/19/16 23:22	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 16:26	02/19/16 23:22	1
Manganese	0.038		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:22	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:22	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:26	02/19/16 23:22	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:22	1
Zinc	1.0		0.50	0.020	mg/L		02/18/16 16:26	02/19/16 23:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 16:26	02/19/16 15:02	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:26	02/19/16 15:02	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		02/18/16 16:45	02/19/16 14:35	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.019	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.76		0.200	0.200	SU			02/19/16 00:09	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits

GC/MS Semi VOA

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

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-9

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 # **500-107558**

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Lab Project #		# of Containers	Matrix	VOC	SVOC	T-H/TAC	MUTIC		PCUP/SPC/TAC	PHT/GP/Si-cd
Project Location/State		Lab PM										
Lab ID	MS/MSD	Sample ID	Date	Time								Comments
		304-81-1301 (0-1)	2-12-16	1530	2	S	X	X	X	X	X	
<i>[Handwritten signature and date 2-12-16]</i>												

Turnaround Time Required (Business Days)

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

Sample Disposal

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

Relinquished By: <i>[Signature]</i>	Company: EA	Date: 2/12/16	Time: 1605	Received By: <i>[Signature]</i>	Company: EA	Date: 2/12/16	Time: 1605
Relinquished By: <i>[Signature]</i>	Company: EA	Date: 2/12/16	Time: 1815	Received By: <i>[Signature]</i>	Company: EA	Date: 2/13/16	Time: 0800

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: 500-107558-9

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
41W 107 IL 38 ISGS #3011-82 (Residence)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.90638495 Longitude: -88.41581412
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90638495 Longitude: -88.41581412

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 3011-82-B01 was sampled within the construction zone adjacent to ISGS #3011-82 (Residence). Refer to PSI Report for ISGS #3011-82 (Residence) including Table 4-4, and Figures 4-11A&B.

- 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 J107558-10.

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:

3/17/16
 Date:






Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-82 (Residence)	Comparison Criteria			
BORING	3011-82-B01	MACs			TACO
SAMPLE	3011-82-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.16				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	0.015 J	12,000	--	--	--
Benzo[a]anthracene	0.095	0.9	1.8	1.1	--
Benzo[a]pyrene	0.13 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.25	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.088	--	--	--	--
Benzo[k]fluoranthene	0.1	9	--	--	--
Chrysene	0.14	88	--	--	--
Dibenzo(a,h)anthracene	0.019 J	0.09	0.42	0.2	--
Fluoranthene	0.25	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.08	0.9	1.6	0.9	--
Phenanthrene	0.083	--	--	--	--
Pyrene	0.25	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	3.2	11.3	13	--	--
Barium	42	1,500	--	--	--
Beryllium	0.3	22	--	--	--
Boron	7	40	--	--	--
Cadmium	0.28	5.2	--	--	--
Calcium	100,000	--	--	--	--
Chromium	19	21	--	--	--
Cobalt	5.6	20	--	--	--
Copper	15	2,900	--	--	--
Iron	11,000	15,000	15,900	--	--
Lead	120 †	107	--	--	--
Magnesium	49,000	325,000	--	--	--
Manganese	530	630	636	--	--
Mercury	0.023	0.89	--	--	--
Nickel	10	100	--	--	--
Potassium	740	--	--	--	--
Selenium	0.56 J	1.3	--	--	--
Sodium	1,500	--	--	--	--
Vanadium	12	550	--	--	--
Zinc	110	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.35 J	--	--	--	2
Boron	0.76	--	--	--	2
Cadmium	0.0021 J	--	--	--	0.005
Iron	0.31 J	--	--	--	5
Lead	ND U	--	--	--	0.0075
Manganese	0.55 L	--	--	--	0.15
Zinc	0.23 J	--	--	--	5
SPLP Metals (mg/L)					
Manganese	0.23 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: 500-107558-10
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:23:40 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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

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

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

1

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Job ID: 500-107558-10

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-10

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The instrument blank for analytical batch 500-323716 contained Iron greater than the reporting limit (RL), and were not reanalyzed because the laboratory blank (LB), and bracketing continuing calibration blank (CCB) solutions all had results below the RL. The data have been qualified and reported.

Method(s) 6010B: The continuing calibration blank (CCB) for 500-324314 contained Magnesium above the reporting limit (RL). Associated sample 3011-82-B01 (0-1) (500-107558-22) was not re-analyzed because results were greater than 10X the value found in the CCB.

Method(s) 6010B: The method blank for preparation batch 500-323727 and analytical batch 500-324314 contained Calcium above the reporting limit (RL). Associated sample 3011-82-B01 (0-1) (500-107558-22) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Client Sample ID: 3011-82-B01 (0-1)

Lab Sample ID: 500-107558-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.083		0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.25		0.041	0.0077	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.25		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.095		0.041	0.0056	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.14		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.25		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.10		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.13		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.080		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.019	J	0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.088		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.2		0.64	0.29	mg/Kg	1	☼	6010B	Total/NA
Barium	42		0.64	0.12	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.25	0.055	mg/Kg	1	☼	6010B	Total/NA
Boron	7.0		3.2	0.44	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.28		0.13	0.037	mg/Kg	1	☼	6010B	Total/NA
Calcium	100000		130	41	mg/Kg	10	☼	6010B	Total/NA
Chromium	19		0.64	0.11	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.6		0.32	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	15		0.64	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		130	49	mg/Kg	10	☼	6010B	Total/NA
Lead	120		0.32	0.16	mg/Kg	1	☼	6010B	Total/NA
Magnesium	49000	^	6.4	2.6	mg/Kg	1	☼	6010B	Total/NA
Manganese	530		0.64	0.13	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.64	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	740		32	5.2	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.56	J	0.64	0.31	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500		64	8.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.32	0.093	mg/Kg	1	☼	6010B	Total/NA
Zinc	110		1.3	0.40	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.76		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0021	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Iron	0.31	J ^	0.40	0.20	mg/L	1		6010B	TCLP
Manganese	0.55		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.23	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.23		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.022	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.16		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-22	3011-82-B01 (0-1)	Solid	02/12/16 15:35	02/13/16 08:00

1

2

3

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Client Sample ID: 3011-82-B01 (0-1)

Lab Sample ID: 500-107558-22

Date Collected: 02/12/16 15:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 76.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.021		0.021	0.0042	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Benzene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Bromodichloromethane	<0.0054		0.0054	0.00091	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Bromoform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Bromomethane	<0.0054 *		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
2-Butanone (MEK)	<0.0054		0.0054	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Carbon disulfide	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Carbon tetrachloride	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Chlorobenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Chloroethane	<0.0054 *		0.0054	0.0023	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Chloroform	<0.0054		0.0054	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Chloromethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
cis-1,2-Dichloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
cis-1,3-Dichloropropene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Dibromochloromethane	<0.0054		0.0054	0.00062	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,1-Dichloroethane	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,2-Dichloroethane	<0.0054		0.0054	0.00080	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,1-Dichloroethene	<0.0054		0.0054	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,2-Dichloropropane	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,3-Dichloropropane, Total	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Ethylbenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Methylene Chloride	<0.0054		0.0054	0.0041	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Methyl tert-butyl ether	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Styrene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,1,2,2-Tetrachloroethane	<0.0054		0.0054	0.00085	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Tetrachloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Toluene	<0.0054		0.0054	0.0019	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
trans-1,2-Dichloroethene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
trans-1,3-Dichloropropene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,1,1-Trichloroethane	<0.0054		0.0054	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
1,1,2-Trichloroethane	<0.0054		0.0054	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Trichloroethene	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Vinyl acetate	<0.0054		0.0054	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Vinyl chloride	<0.0054		0.0054	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 03:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 122	02/13/16 09:15	02/20/16 03:05	1
Dibromofluoromethane	109		75 - 120	02/13/16 09:15	02/20/16 03:05	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/13/16 09:15	02/20/16 03:05	1
Toluene-d8 (Surr)	112		75 - 122	02/13/16 09:15	02/20/16 03:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.092	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Client Sample ID: 3011-82-B01 (0-1)

Lab Sample ID: 500-107558-22

Date Collected: 02/12/16 15:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 76.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.051	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Naphthalene	<0.041		0.041	0.0064	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2-Methylnaphthalene	<0.041		0.041	0.0076	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2-Nitrophenol	<0.41		0.41	0.098	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,4-Dinitrophenol	<0.83		0.83	0.73	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Acenaphthylene	<0.041		0.041	0.0055	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
2,4-Dinitrotoluene	<0.21		0.21	0.066	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Hexachlorobenzene	<0.083		0.083	0.0096	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Phenanthrene	0.083		0.041	0.0058	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Anthracene	0.015 J		0.041	0.0069	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Fluoranthene	0.25		0.041	0.0077	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Pyrene	0.25		0.041	0.0082	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Butyl benzyl phthalate	<0.21		0.21	0.079	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Benzo[a]anthracene	0.095		0.041	0.0056	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Client Sample ID: 3011-82-B01 (0-1)

Lab Sample ID: 500-107558-22

Date Collected: 02/12/16 15:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 76.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.14		0.041	0.011	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.076	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Di-n-octyl phthalate	<0.21		0.21	0.068	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Benzo[b]fluoranthene	0.25		0.041	0.0089	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Benzo[k]fluoranthene	0.10		0.041	0.012	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Benzo[a]pyrene	0.13		0.041	0.0080	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Indeno[1,2,3-cd]pyrene	0.080		0.041	0.011	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Dibenz(a,h)anthracene	0.019	J	0.041	0.0080	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
Benzo[g,h,i]perylene	0.088		0.041	0.013	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/17/16 07:25	02/25/16 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	87		25 - 110	02/17/16 07:25	02/25/16 14:37	1
Phenol-d5	85		31 - 110	02/17/16 07:25	02/25/16 14:37	1
Nitrobenzene-d5	81		25 - 115	02/17/16 07:25	02/25/16 14:37	1
2-Fluorobiphenyl	77		25 - 119	02/17/16 07:25	02/25/16 14:37	1
2,4,6-Tribromophenol	91		35 - 137	02/17/16 07:25	02/25/16 14:37	1
Terphenyl-d14	122		36 - 134	02/17/16 07:25	02/25/16 14:37	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.3		1.3	0.26	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Arsenic	3.2		0.64	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Barium	42		0.64	0.12	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Beryllium	0.30		0.25	0.055	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Boron	7.0		3.2	0.44	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Cadmium	0.28		0.13	0.037	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Calcium	100000		130	41	mg/Kg	☼	02/20/16 11:33	02/24/16 17:59	10
Chromium	19		0.64	0.11	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Cobalt	5.6		0.32	0.072	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Copper	15		0.64	0.14	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Iron	11000		130	49	mg/Kg	☼	02/20/16 11:33	02/24/16 17:59	10
Lead	120		0.32	0.16	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Magnesium	49000	^	6.4	2.6	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Manganese	530		0.64	0.13	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Nickel	10		0.64	0.17	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Potassium	740		32	5.2	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Selenium	0.56	J	0.64	0.31	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Silver	<0.32		0.32	0.074	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Sodium	1500		64	8.4	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Thallium	<0.64		0.64	0.31	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Vanadium	12		0.32	0.093	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1
Zinc	110		1.3	0.40	mg/Kg	☼	02/20/16 11:33	02/24/16 14:02	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.35	J	0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:27	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:26	02/19/16 23:27	1
Boron	0.76		0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:27	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Client Sample ID: 3011-82-B01 (0-1)

Lab Sample ID: 500-107558-22

Date Collected: 02/12/16 15:35

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 76.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0021	J	0.0050	0.0020	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Iron	0.31	J ^	0.40	0.20	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Manganese	0.55		0.025	0.010	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Silver	<0.025		0.025	0.010	mg/L	-	02/18/16 16:26	02/19/16 23:27	1
Zinc	0.23	J	0.50	0.020	mg/L	-	02/18/16 16:26	02/19/16 23:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.23		0.025	0.010	mg/L	-	02/18/16 16:28	02/19/16 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L	-	02/18/16 16:26	02/19/16 15:06	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/18/16 16:26	02/19/16 15:06	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	-	02/18/16 16:45	02/19/16 14:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.022	0.011	mg/Kg	☼	02/18/16 16:00	02/19/16 12:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.16		0.200	0.200	SU	-		02/19/16 00:16	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-10

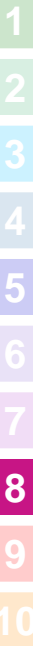
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60494
 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 #: **500-107558**
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter										Preservative Key					
KE		1009391-0008-01														1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other					
Project Name		Project Location/State		Lab Project #		Lab RM															
TC 39		Frank County, IL		50011664		D weight															
Sampler		Sample ID		Sampling		# of Containers		Matrix													
S. Casper				Date Time																	
Lab ID	MS/MSD																				
2275		3011-82-B01 (01)		2-12-16 / 1535		2 5		Voc		Svoc		Total TAC		TEUP/STP		TAL mobil		PH/EC/SLU			
								X		X		X		X		X					
<i>[Large diagonal scribble across the table]</i>																					

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	Company	Date	Time	Received By	Company	Date	Time
S. Casper	KE	2/12/16	1605	[Signature]	TA	2/12/16	1605
P. Neal	TA	2/12/16	1815	[Signature]	TA	2/13/16	0800
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

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: 500-107558-10

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
41W 021 IL 38 ISGS #3011-83 (Residence)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.90646862 Longitude: -88.41453589
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90646862 Longitude: -88.41453589

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 3011-83-B01 was sampled within the construction zone adjacent to ISGS #3011-83 (Residence). Refer to PSI Report for ISGS #3011-83 (Residence) including Table 4-4, and Figures 4-12A&B.

- 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 J107558-11.

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.

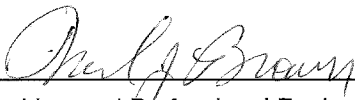
Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown

Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-83 (Residence)	Comparison Criteria			
BORING	3011-83-B01	MACs			TACO
SAMPLE	3011-83-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.46				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	0.027 J	570	--	--	--
Acenaphthylene	0.0085 J	--	--	--	--
Anthracene	0.12	12,000	--	--	--
Benzo[a]anthracene	0.7	0.9	1.8	1.1	--
Benzo[a]pyrene	0.83 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	1.5 †	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.46	--	--	--	--
Benzo[k]fluoranthene	0.61	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.41	46	--	--	--
Carbazole	0.099 J	0.6	--	--	--
Chrysene	0.9	88	--	--	--
Dibenzo(a,h)anthracene	0.1 †	0.09	0.42	0.2	--
Fluoranthene	1.7	3,100	--	--	--
Fluorene	0.038 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.47	0.9	1.6	0.9	--
Phenanthrene	0.82	--	--	--	--
Pyrene	2.1	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	2.4	11.3	13	--	--
Barium	17	1,500	--	--	--
Beryllium	0.17 J	22	--	--	--
Boron	8.8	40	--	--	--
Cadmium	0.14	5.2	--	--	--
Calcium	140,000	--	--	--	--
Chromium	18	21	--	--	--
Cobalt	3.6	20	--	--	--
Copper	17	2,900	--	--	--
Iron	8,800	15,000	15,900	--	--
Lead	74	107	--	--	--
Magnesium	84,000	325,000	--	--	--
Manganese	290	630	636	--	--
Mercury	0.013 J	0.89	--	--	--
Nickel	7	100	--	--	--
Potassium	520	--	--	--	--
Selenium	0.85	1.3	--	--	--
Sodium	1,100	--	--	--	--
Vanadium	8.6	550	--	--	--
Zinc	68	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.21 J	--	--	--	2
Boron	0.89 J	--	--	--	2
Iron	0.2 J	--	--	--	5
Lead	0.011 L	--	--	--	0.0075
Manganese	1.8 L	--	--	--	0.15
Nickel	0.013 J	--	--	--	0.1
Zinc	0.25 J	--	--	--	5
SPLP Metals (mg/L)					
Lead	0.04 L	--	--	--	0.0075
Manganese	0.13	--	--	--	0.15

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107558-11
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:24:12 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for
Richard Wright, Senior Project Manager
(708)534-5200
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Job ID: 500-107558-11

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-11

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323717 recovered outside control limits for the following analyte: 2-Butanone.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323727 and analytical batch 500-324314 contained Calcium above the reporting limit (RL). Associated sample 3011-83-B01 (0-1) (500-107558-23) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Client Sample ID: 3011-83-B01 (0-1)

Lab Sample ID: 500-107558-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0085	J	0.039	0.0051	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.027	J	0.039	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.038	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.82		0.039	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.12		0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Carbazole	0.099	J	0.20	0.097	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	1.7		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	2.1		0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.70		0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.90		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.41		0.20	0.071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1.5		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.61		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.83		0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.47		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.10		0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.46		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.4		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	17		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.17	J	0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	8.8		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	18		0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.6		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8800		110	43	mg/Kg	10	☼	6010B	Total/NA
Lead	74		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	84000		56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	290		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.0		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.85		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.6		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	68		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.21	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.89	F1	0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.20	J ^	0.40	0.20	mg/L	1		6010B	TCLP
Lead	0.011		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	1.8		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.040		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.13		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.46		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-23	3011-83-B01 (0-1)	Solid	02/12/16 15:45	02/13/16 08:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Client Sample ID: 3011-83-B01 (0-1)

Lab Sample ID: 500-107558-23

Date Collected: 02/12/16 15:45

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.023		0.023	0.0044	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Benzene	<0.0057		0.0057	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Bromodichloromethane	<0.0057		0.0057	0.00097	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Bromoform	<0.0057		0.0057	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Bromomethane	<0.0057		0.0057	0.0021	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
2-Butanone (MEK)	<0.0057 *		0.0057	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Carbon disulfide	<0.0057		0.0057	0.0021	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Carbon tetrachloride	<0.0057		0.0057	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Chlorobenzene	<0.0057		0.0057	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Chloroethane	<0.0057		0.0057	0.0024	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Chloroform	<0.0057		0.0057	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Chloromethane	<0.0057		0.0057	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
cis-1,2-Dichloroethene	<0.0057		0.0057	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
cis-1,3-Dichloropropene	<0.0057		0.0057	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Dibromochloromethane	<0.0057		0.0057	0.00066	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,1-Dichloroethane	<0.0057		0.0057	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,2-Dichloroethane	<0.0057		0.0057	0.00085	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,1-Dichloroethene	<0.0057		0.0057	0.0021	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,2-Dichloropropane	<0.0057		0.0057	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,3-Dichloropropane, Total	<0.0057		0.0057	0.0016	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Ethylbenzene	<0.0057		0.0057	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
2-Hexanone	<0.0057		0.0057	0.0018	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Methylene Chloride	<0.0057		0.0057	0.0043	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
4-Methyl-2-pentanone (MIBK)	<0.0057		0.0057	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Methyl tert-butyl ether	<0.0057		0.0057	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Styrene	<0.0057		0.0057	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,1,2,2-Tetrachloroethane	<0.0057		0.0057	0.00091	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Tetrachloroethene	<0.0057		0.0057	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Toluene	<0.0057		0.0057	0.0020	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
trans-1,2-Dichloroethene	<0.0057		0.0057	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
trans-1,3-Dichloropropene	<0.0057		0.0057	0.0016	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,1,1-Trichloroethane	<0.0057		0.0057	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
1,1,2-Trichloroethane	<0.0057		0.0057	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Trichloroethene	<0.0057		0.0057	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Vinyl acetate	<0.0057		0.0057	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Vinyl chloride	<0.0057		0.0057	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1
Xylenes, Total	<0.011		0.011	0.0021	mg/Kg	☼	02/13/16 09:15	02/20/16 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 122	02/13/16 09:15	02/20/16 18:58	1
Dibromofluoromethane	101		75 - 120	02/13/16 09:15	02/20/16 18:58	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 134	02/13/16 09:15	02/20/16 18:58	1
Toluene-d8 (Surr)	107		75 - 122	02/13/16 09:15	02/20/16 18:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.086	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.058	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Client Sample ID: 3011-83-B01 (0-1)

Lab Sample ID: 500-107558-23

Date Collected: 02/12/16 15:45

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 84.1

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	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2-Methylphenol	<0.20		0.20	0.062	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2-Chlorophenol	<0.20		0.20	0.066	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,4-Dichlorophenol	<0.39		0.39	0.092	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2-Methylnaphthalene	<0.039		0.039	0.0071	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2-Nitroaniline	<0.20		0.20	0.052	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,6-Dinitrotoluene	<0.20		0.20	0.076	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Acenaphthylene	0.0085	J	0.039	0.0051	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Acenaphthene	0.027	J	0.039	0.0070	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Fluorene	0.038	J	0.039	0.0055	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Phenanthrene	0.82		0.039	0.0054	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Anthracene	0.12		0.039	0.0065	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Carbazole	0.099	J	0.20	0.097	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Fluoranthene	1.7		0.039	0.0072	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Pyrene	2.1		0.039	0.0077	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Benzo[a]anthracene	0.70		0.039	0.0052	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Client Sample ID: 3011-83-B01 (0-1)

Lab Sample ID: 500-107558-23

Date Collected: 02/12/16 15:45

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.90		0.039	0.011	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.054	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Bis(2-ethylhexyl) phthalate	0.41		0.20	0.071	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Di-n-octyl phthalate	<0.20		0.20	0.063	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Benzo[b]fluoranthene	1.5		0.039	0.0084	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Benzo[k]fluoranthene	0.61		0.039	0.011	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Benzo[a]pyrene	0.83		0.039	0.0075	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Indeno[1,2,3-cd]pyrene	0.47		0.039	0.010	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Dibenz(a,h)anthracene	0.10		0.039	0.0075	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
Benzo[g,h,i]perylene	0.46		0.039	0.013	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/17/16 07:25	02/25/16 15:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	87		25 - 110	02/17/16 07:25	02/25/16 15:05	1
Phenol-d5	86		31 - 110	02/17/16 07:25	02/25/16 15:05	1
Nitrobenzene-d5	83		25 - 115	02/17/16 07:25	02/25/16 15:05	1
2-Fluorobiphenyl	77		25 - 119	02/17/16 07:25	02/25/16 15:05	1
2,4,6-Tribromophenol	89		35 - 137	02/17/16 07:25	02/25/16 15:05	1
Terphenyl-d14	149	X	36 - 134	02/17/16 07:25	02/25/16 15:05	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Arsenic	2.4		0.56	0.26	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Barium	17		0.56	0.10	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Beryllium	0.17	J	0.22	0.048	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Boron	8.8		2.8	0.39	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Cadmium	0.14		0.11	0.032	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Calcium	140000		110	36	mg/Kg	☼	02/20/16 11:33	02/24/16 18:03	10
Chromium	18		0.56	0.096	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Cobalt	3.6		0.28	0.063	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Copper	17		0.56	0.12	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Iron	8800		110	43	mg/Kg	☼	02/20/16 11:33	02/24/16 18:03	10
Lead	74		0.28	0.14	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Magnesium	84000		56	23	mg/Kg	☼	02/20/16 11:33	02/24/16 18:03	10
Manganese	290		0.56	0.11	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Nickel	7.0		0.56	0.15	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Potassium	520		28	4.6	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Selenium	0.85		0.56	0.28	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Sodium	1100		56	7.4	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Vanadium	8.6		0.28	0.082	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1
Zinc	68		1.1	0.35	mg/Kg	☼	02/20/16 11:33	02/24/16 14:07	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.21	J	0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:32	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:26	02/19/16 23:32	1
Boron	0.89	F1	0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:32	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Client Sample ID: 3011-83-B01 (0-1)

Lab Sample ID: 500-107558-23

Date Collected: 02/12/16 15:45

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 84.1

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		02/18/16 16:26	02/19/16 23:32	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:32	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:32	1
Iron	0.20	J ^	0.40	0.20	mg/L		02/18/16 16:26	02/19/16 23:32	1
Lead	0.011		0.0075	0.0075	mg/L		02/18/16 16:26	02/19/16 23:32	1
Manganese	1.8		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:32	1
Nickel	0.013	J	0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:32	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:26	02/19/16 23:32	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:32	1
Zinc	0.25	J	0.50	0.020	mg/L		02/18/16 16:26	02/19/16 23:32	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.040		0.0075	0.0075	mg/L		02/18/16 16:28	02/19/16 15:11	1
Manganese	0.13		0.025	0.010	mg/L		02/18/16 16:28	02/19/16 15:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 16:26	02/19/16 15:11	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:26	02/19/16 15:11	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		02/18/16 16:45	02/19/16 14:42	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.013	J	0.018	0.0095	mg/Kg	☼	02/18/16 16:00	02/19/16 12:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.46		0.200	0.200	SU			02/19/16 00:22	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-11

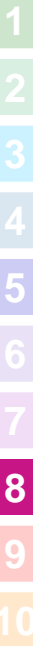
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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)	Bill To _____ (optional)
Contact: _____	Contact: _____
Company: _____	Company: _____
Address: _____	Address: _____
Address: _____	Address: _____
Phone: _____	Phone: _____
Fax: _____	Fax: _____
E-Mail: _____	PO#/Reference# _____

Chain of Custody Record

Lab Job #: **500-107558**
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		1009341-0008-01									
Project Name		Lab Project #		# of Containers		Matrix					
TL38		50011864									
Project Location/State		Lab PM									
Kane County IL		D Wright									
Sample											
S. Cooper											
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix					
2324		3011-03-B01 (0-1)	2-12-16	1545	2	S	VOC	Svcs	Total TA	Total TA	PH/9.5 lib

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

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

Requested Due Date: _____

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

Relinquished By: <i>[Signature]</i> Company: EE Date: 2-12-16 Time: 1605	Received By: <i>[Signature]</i> Company: TA Date: 2/12/16 Time: 1605	Lab Courier: _____
Relinquished By: <i>[Signature]</i> Company: TA Date: 2/12/16 Time: 1815	Received By: <i>[Signature]</i> Company: TA Date: 01/13/16 Time: 0800	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: 500-107558-11

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
40W 600 to 41W 000 blocks of IL 38 ISGS #3011-84 (Agricultural Land)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.906539 Longitude: -88.40572
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.906539 Longitude: -88.40572

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):

Locations 3011-84-B01, B04, & 3011-89-B01 were sampled within the construction zone adjacent to ISGS #3011-84 (Agricultural Land). Refer to PSI Report for ISGS #3011-84 (Agricultural Land) including Table 4-4, and Figures 4-12A&B.

- 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 J107558-12, J107509-5, and J107509-7.

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.

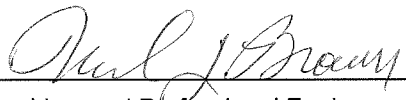
Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown

Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-84 (Agricultural Land)		Comparison Criteria			
BORING	3011-84-B01	3011-84-B04	MACs			TACO
SAMPLE	3011-84-B01 (0-1)	3011-84-B04 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil	Soil				
DEPTH (feet)	0-1	0-1				
pH	8.83	8.45				
VOCs (None Detected)						
SVOCs (mg/kg)						
Acenaphthene	ND U	0.01 J	570	--	--	--
Anthracene	0.011 J	0.041	12,000	--	--	--
Benzo[a]anthracene	0.069	0.19	0.9	1.8	1.1	--
Benzo[a]pyrene	0.094 †	0.26 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.17	0.44	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.083	0.22	--	--	--	--
Benzo[k]fluoranthene	0.062	0.17	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	27	46	--	--	--
Chrysene	0.095	0.28	88	--	--	--
Dibenzo(a,h)anthracene	ND U	0.041	0.09	0.42	0.2	--
Fluoranthene	0.15	0.33	3,100	--	--	--
Fluorene	ND U	0.013 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.064	0.16	0.9	1.6	0.9	--
Phenanthrene	0.058	0.22	--	--	--	--
Pyrene	0.2	0.66	2,300	--	--	--
Inorganics (mg/kg)						
Arsenic	5.5	5.1	11.3	13	--	--
Barium	31	52	1,500	--	--	--
Beryllium	0.4	0.37	22	--	--	--
Boron	6.1	6.6	40	--	--	--
Cadmium	0.063 J	0.15	5.2	--	--	--
Calcium	69,000	120,000	--	--	--	--
Chromium	19	10	21	--	--	--
Cobalt	6.9	5.1	20	--	--	--
Copper	17	14	2,900	--	--	--
Iron	16,000 †m	11,000	15,000	15,900	--	--
Lead	88	48	107	--	--	--
Magnesium	35,000	55,000	325,000	--	--	--
Manganese	410	370	630	636	--	--
Mercury	0.023	0.017 J	0.89	--	--	--
Nickel	17	11	100	--	--	--
Potassium	980	720	--	--	--	--
Sodium	1,100	700	--	--	--	--
Vanadium	18	15	550	--	--	--
Zinc	57	61	5,100	--	--	--
TCLP Metals (mg/L)						
Barium	0.28 J	0.37 J	--	--	--	2
Boron	0.8	0.72	--	--	--	2
Iron	ND U	ND U	--	--	--	5
Lead	0.0094 L	ND U	--	--	--	0.0075
Manganese	0.91 L	1 L	--	--	--	0.15
Zinc	2.3	0.18 J	--	--	--	5
SPLP Metals (mg/L)						
Lead	0.043 L	NA	--	--	--	0.0075
Manganese	0.2 L	0.14	--	--	--	0.15

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A
CONTAMINANTS OF CONCERN

SITE	ISGS #3011-89 (Johnson's Farm and Country Store)	Comparison Criteria			
BORING	3011-89-B01	MACs			TACO
SAMPLE	3011-89-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.91				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	0.0083 J	12,000	--	--	--
Benzo[a]anthracene	0.065	0.9	1.8	1.1	--
Benzo[a]pyrene	0.1 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.2	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.13	--	--	--	--
Benzo[k]fluoranthene	0.093	9	--	--	--
Chrysene	0.11	88	--	--	--
Fluoranthene	0.11	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.092	0.9	1.6	0.9	--
Phenanthrene	0.059	--	--	--	--
Pyrene	0.26	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	4.9	11.3	13	--	--
Barium	81	1,500	--	--	--
Beryllium	0.43	22	--	--	--
Boron	3.9	40	--	--	--
Calcium	55,000	--	--	--	--
Chromium	13	21	--	--	--
Cobalt	6.8	20	--	--	--
Copper	12	2,900	--	--	--
Iron	13,000	15,000	15,900	--	--
Lead	25	107	--	--	--
Magnesium	28,000	325,000	--	--	--
Manganese	320	630	636	--	--
Mercury	0.011 J	0.89	--	--	--
Nickel	12	100	--	--	--
Potassium	710	--	--	--	--
Sodium	1,800	--	--	--	--
Vanadium	23	550	--	--	--
Zinc	45	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.61	--	--	--	2
Boron	0.6	--	--	--	2
Manganese	1.2 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.46 L	--	--	--	0.15

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107509-5
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:49:25 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

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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.

1

2

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Job ID: 500-107509-5

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-5

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323422: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-84-B04 (0-1) (500-107509-11), 3011-84-B02 (0-1) (500-107509-12), 3011-84-B03 (0-1) (500-107509-13), 3011-84-B03 (0-1)D (500-107509-14), 3011-84-B05 (0-1) (500-107509-15), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS) and (500-107509-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample required a dilution due to the nature of the sample matrix: 3011-84-B04 (0-1) (500-107509-11). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-324053 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-84-B04 (0-1) (500-107509-11), 3011-84-B02 (0-1) (500-107509-12), 3011-84-B03 (0-1) (500-107509-13), 3011-84-B03 (0-1)D (500-107509-14) and (500-107509-E-1-D).

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Client Sample ID: 3011-84-B04 (0-1)

Lab Sample ID: 500-107509-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.010	J	0.040	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.013	J	0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.22		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.041		0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.33		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.66		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.19		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.28		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.44		0.040	0.0087	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.17		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.26		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.16		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.041		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.22		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate - DL	27		4.1	1.5	mg/Kg	20	☼	8270D	Total/NA
Arsenic	5.1		0.63	0.29	mg/Kg	1	☼	6010B	Total/NA
Barium	52		0.63	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.37		0.25	0.054	mg/Kg	1	☼	6010B	Total/NA
Boron	6.6		3.1	0.44	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15		0.13	0.036	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	130	40	mg/Kg	10	☼	6010B	Total/NA
Chromium	10	B	0.63	0.11	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.1		0.31	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.63	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		13	4.8	mg/Kg	1	☼	6010B	Total/NA
Lead	48		0.31	0.16	mg/Kg	1	☼	6010B	Total/NA
Magnesium	55000	B	6.3	2.5	mg/Kg	1	☼	6010B	Total/NA
Manganese	370		0.63	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	11		0.63	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	720		31	5.1	mg/Kg	1	☼	6010B	Total/NA
Sodium	700		63	8.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.31	0.091	mg/Kg	1	☼	6010B	Total/NA
Zinc	61		1.3	0.40	mg/Kg	1	☼	6010B	Total/NA
Barium	0.37	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.72		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.18	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.14		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.017	J	0.021	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.45		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-11	3011-84-B04 (0-1)	Solid	02/11/16 10:35	02/12/16 07:55

1

2

3

4

5

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9

10

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Client Sample ID: 3011-84-B04 (0-1)

Lab Sample ID: 500-107509-11

Date Collected: 02/11/16 10:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.026		0.026	0.0051	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Benzene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Bromodichloromethane	<0.0066		0.0066	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Bromoform	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Bromomethane	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
2-Butanone (MEK)	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Carbon disulfide	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Carbon tetrachloride	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Chlorobenzene	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Chloroethane	<0.0066	*	0.0066	0.0028	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Chloroform	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Chloromethane	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
cis-1,2-Dichloroethene	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
cis-1,3-Dichloropropene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Dibromochloromethane	<0.0066		0.0066	0.00076	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,1-Dichloroethane	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,2-Dichloroethane	<0.0066		0.0066	0.00098	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,1-Dichloroethene	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,2-Dichloropropane	<0.0066		0.0066	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,3-Dichloropropane, Total	<0.0066		0.0066	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Ethylbenzene	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
2-Hexanone	<0.0066		0.0066	0.0021	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Methylene Chloride	<0.0066		0.0066	0.0050	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
4-Methyl-2-pentanone (MIBK)	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Methyl tert-butyl ether	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Styrene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,1,2,2-Tetrachloroethane	<0.0066		0.0066	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Tetrachloroethene	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Toluene	<0.0066		0.0066	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
trans-1,2-Dichloroethene	<0.0066		0.0066	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
trans-1,3-Dichloropropene	<0.0066		0.0066	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,1,1-Trichloroethane	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
1,1,2-Trichloroethane	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Trichloroethene	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Vinyl acetate	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Vinyl chloride	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1
Xylenes, Total	<0.013		0.013	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 22:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 122	02/12/16 09:20	02/18/16 22:11	1
Dibromofluoromethane	94		75 - 120	02/12/16 09:20	02/18/16 22:11	1
1,2-Dichloroethane-d4 (Surr)	87		70 - 134	02/12/16 09:20	02/18/16 22:11	1
Toluene-d8 (Surr)	103		75 - 122	02/12/16 09:20	02/18/16 22:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.090	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Client Sample ID: 3011-84-B04 (0-1)

Lab Sample ID: 500-107509-11

Date Collected: 02/11/16 10:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.8

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	0.048	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,4-Dichlorophenol	<0.40		0.40	0.096	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2-Methylnaphthalene	<0.040		0.040	0.0074	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2-Chloronaphthalene	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Acenaphthene	0.010	J	0.040	0.0073	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Fluorene	0.013	J	0.040	0.0057	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Hexachlorobenzene	<0.081		0.081	0.0094	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Pentachlorophenol	<0.81		0.81	0.65	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Phenanthrene	0.22		0.040	0.0056	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Anthracene	0.041		0.040	0.0068	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Fluoranthene	0.33		0.040	0.0075	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Pyrene	0.66		0.040	0.0080	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Butyl benzyl phthalate	<0.20		0.20	0.077	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Benzo[a]anthracene	0.19		0.040	0.0054	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Client Sample ID: 3011-84-B04 (0-1)

Lab Sample ID: 500-107509-11

Date Collected: 02/11/16 10:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.28		0.040	0.011	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.057	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Benzo[b]fluoranthene	0.44		0.040	0.0087	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Benzo[k]fluoranthene	0.17		0.040	0.012	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Benzo[a]pyrene	0.26		0.040	0.0078	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Indeno[1,2,3-cd]pyrene	0.16		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Dibenz(a,h)anthracene	0.041		0.040	0.0078	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Benzo[g,h,i]perylene	0.22		0.040	0.013	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:05	02/24/16 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol	97		25 - 110				02/16/16 07:05	02/24/16 00:55	1
Phenol-d5	94		31 - 110				02/16/16 07:05	02/24/16 00:55	1
Nitrobenzene-d5	81		25 - 115				02/16/16 07:05	02/24/16 00:55	1
2-Fluorobiphenyl	85		25 - 119				02/16/16 07:05	02/24/16 00:55	1
2,4,6-Tribromophenol	75		35 - 137				02/16/16 07:05	02/24/16 00:55	1
Terphenyl-d14	180	X	36 - 134				02/16/16 07:05	02/24/16 00:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	27		4.1	1.5	mg/Kg	☼	02/16/16 07:05	02/24/16 01:20	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.3		1.3	0.26	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Arsenic	5.1		0.63	0.29	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Barium	52		0.63	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Beryllium	0.37		0.25	0.054	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Boron	6.6		3.1	0.44	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Cadmium	0.15		0.13	0.036	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Calcium	120000	B	130	40	mg/Kg	☼	02/17/16 15:16	02/22/16 23:38	10
Chromium	10	B	0.63	0.11	mg/Kg	☼	02/17/16 15:16	02/23/16 15:38	1
Cobalt	5.1		0.31	0.071	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Copper	14		0.63	0.14	mg/Kg	☼	02/17/16 15:16	02/23/16 15:38	1
Iron	11000		13	4.8	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Lead	48		0.31	0.16	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Magnesium	55000	B	6.3	2.5	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Manganese	370		0.63	0.12	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Nickel	11		0.63	0.17	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Potassium	720		31	5.1	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Selenium	<0.63		0.63	0.31	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Silver	<0.31	^	0.31	0.073	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Sodium	700		63	8.3	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Thallium	<0.63		0.63	0.31	mg/Kg	☼	02/17/16 15:16	02/22/16 22:00	1
Vanadium	15		0.31	0.091	mg/Kg	☼	02/17/16 15:16	02/23/16 15:38	1
Zinc	61		1.3	0.40	mg/Kg	☼	02/17/16 15:16	02/23/16 15:38	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Client Sample ID: 3011-84-B04 (0-1)

Lab Sample ID: 500-107509-11

Date Collected: 02/11/16 10:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 78.8

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.37	J	0.50	0.050	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Beryllium	<0.0040		0.0040	0.0040	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Boron	0.72		0.50	0.050	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Cadmium	<0.0050		0.0050	0.0020	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Iron	<0.40		0.40	0.20	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Manganese	1.0		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Silver	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:59	1
Zinc	0.18	J	0.50	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.14		0.025	0.010	mg/L	-	02/17/16 08:31	02/20/16 01:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L	-	02/16/16 14:27	02/18/16 12:58	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/16/16 14:27	02/18/16 12:58	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/17/16 16:15	02/18/16 11:50	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	J	0.021	0.011	mg/Kg	☼	02/18/16 16:00	02/19/16 10:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.45		0.200	0.200	SU	-		02/13/16 11:01	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-5

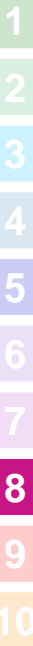
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509

Chain of Custody Number: _____

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 PM											
Sampler													
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix							Comments
			Date	Time									
11		3011-84-B04(0-1)	2-11-16	1035	25		VOC	SUOC	TOTAL PAH	metals	TURBIDITY	PAHs	
12		3011-84-B02(0-1)	2-11-16	1045	25								
13		3011-84-B03(0-1)	2-11-16	1100	25								
14		3011-84-B03(0-1) D	2-11-16	1100	25								
15		3011-84-B05(0-1)	2-11-16	1110	25								
2-11-16													

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>EA</u>	Date <u>2/11/16</u>	Time <u>1600</u>	Received By <u>[Signature]</u> Company: <u>EA</u>	Date <u>2/11/16</u>	Time <u>1600</u>	Lab Courier <u>TA</u>
Relinquished By <u>[Signature]</u> Company: <u>EA</u>	Date <u>2/11/16</u>	Time <u>1735</u>	Received By <u>[Signature]</u> Company: <u>EA-CHE</u>	Date <u>2/12/16</u>	Time <u>0755</u>	
Relinquished By Company:	Date	Time	Received By Company:	Date	Time	

- 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: 500-107509-5

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107509-7
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:51:48 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Job ID: 500-107509-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-7

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323422: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-89-B01 (0-1) (500-107509-17), 3011-89-B02 (0-1) (500-107509-18), 3011-89-B03 (0-1) (500-107509-19), 3011-89-B04 (0-1) (500-107509-20), 3011-89-B05 (0-1) (500-107509-21), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS), (500-107509-E-1-C MSD), (500-107509-E-21-B MS) and (500-107509-E-21-C MS). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated samples 3011-89-B01 (0-1) (500-107509-17), 3011-89-B02 (0-1) (500-107509-18), 3011-89-B03 (0-1) (500-107509-19), 3011-89-B04 (0-1) (500-107509-20) and 3011-89-B05 (0-1) (500-107509-21) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated samples 3011-89-B01 (0-1) (500-107509-17), 3011-89-B02 (0-1) (500-107509-18), 3011-89-B03 (0-1) (500-107509-19), 3011-89-B04 (0-1) (500-107509-20) and 3011-89-B05 (0-1) (500-107509-21) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
 Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.059		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0083	J	0.039	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.11		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.26		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.065		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.11		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.093		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.092		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.9		0.53	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	81		0.53	0.098	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.43		0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	3.9		2.7	0.37	mg/Kg	1	☼	6010B	Total/NA
Calcium	55000	B	110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	13		0.53	0.092	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.8		0.27	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.53	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	25		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	28000		5.3	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	320		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	710		27	4.4	mg/Kg	1	☼	6010B	Total/NA
Sodium	1800		53	7.1	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.26	J	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23		0.27	0.078	mg/Kg	1	☼	6010B	Total/NA
Zinc	45		1.1	0.34	mg/Kg	1	☼	6010B	Total/NA
Barium	0.61		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.60		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.20	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.46		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.011	J	0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.91		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-17	3011-89-B01 (0-1)	Solid	02/11/16 11:25	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chloroform	<0.0046		0.0046	0.00090	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1-Dichloroethane	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Tetrachloroethene	<0.0046		0.0046	0.00096	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 122	02/12/16 09:20	02/19/16 00:43	1
Dibromofluoromethane	97		75 - 120	02/12/16 09:20	02/19/16 00:43	1
1,2-Dichloroethane-d4 (Surr)	89		70 - 134	02/12/16 09:20	02/19/16 00:43	1
Toluene-d8 (Surr)	102		75 - 122	02/12/16 09:20	02/19/16 00:43	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	☼	02/16/16 07:05	02/23/16 05:52	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
 Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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	☼	02/16/16 07:05	02/23/16 05:52	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Phenanthrene	0.059		0.039	0.0055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Anthracene	0.0083 J		0.039	0.0066	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Fluoranthene	0.11		0.039	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Pyrene	0.26		0.039	0.0078	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[a]anthracene	0.065		0.039	0.0053	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.11		0.039	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[b]fluoranthene	0.20		0.039	0.0085	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[k]fluoranthene	0.093		0.039	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[a]pyrene	0.10		0.039	0.0076	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Indeno[1,2,3-cd]pyrene	0.092		0.039	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[g,h,i]perylene	0.13		0.039	0.013	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	98		25 - 110	02/16/16 07:05	02/23/16 05:52	1
Phenol-d5	90		31 - 110	02/16/16 07:05	02/23/16 05:52	1
Nitrobenzene-d5	80		25 - 115	02/16/16 07:05	02/23/16 05:52	1
2-Fluorobiphenyl	80		25 - 119	02/16/16 07:05	02/23/16 05:52	1
2,4,6-Tribromophenol	79		35 - 137	02/16/16 07:05	02/23/16 05:52	1
Terphenyl-d14	225	X	36 - 134	02/16/16 07:05	02/23/16 05:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Arsenic	4.9		0.53	0.25	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Barium	81		0.53	0.098	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Beryllium	0.43		0.21	0.046	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Boron	3.9		2.7	0.37	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Cadmium	<0.11		0.11	0.031	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Calcium	55000	B	110	34	mg/Kg	☼	02/18/16 09:48	02/23/16 22:15	10
Chromium	13		0.53	0.092	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Cobalt	6.8		0.27	0.060	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Copper	12		0.53	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Iron	13000		11	4.1	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Lead	25		0.27	0.13	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Magnesium	28000		5.3	2.2	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Manganese	320		0.53	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Nickel	12		0.53	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Potassium	710		27	4.4	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Selenium	<0.53		0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Silver	<0.27		0.27	0.062	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Sodium	1800		53	7.1	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Thallium	0.26	J	0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Vanadium	23		0.27	0.078	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Zinc	45		1.1	0.34	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.61		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 06:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 06:43	1
Boron	0.60		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 06:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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		02/18/16 08:47	02/19/16 06:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 06:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 06:43	1
Manganese	1.2		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 06:43	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Zinc	0.20	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 06:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.46		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 07:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 17:20	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 17:20	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		02/17/16 16:15	02/18/16 12:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.91		0.200	0.200	SU			02/13/16 11:15	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

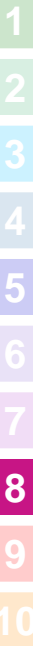
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
Project Name		Lab Project #		Date		Time		# of Containers		Matrix		
EE		10093M-0008-01										
IL 39		5001864										
Kane County, IL		D. Wright										
S Cooper												
Lab ID	M/S/MSD	Sample ID	Date	Time	# of Containers	Matrix	Voc	Six	Total Thal	metals	TCAP/SPC/THAL	pH/g Solids
17		3011-89-B01 (0-1)	2-11-16	1125	2	S	X	X	X	X	X	X
18		3011-89-B02 (0-1)	2-11-16	1135	2	S	X	X	X	X	X	X
19		3011-89-B03 (0-1)	2-11-16	1140	2	S	X	X	X	X	X	X
20		3011-89-B04 (0-1)	2-11-16	1145	2	S	X	X	X	X	X	X
21		3011-89-B05 (0-1)	2-11-16	1150	2	S	X	X	X	X	X	X
3011-89-B06 (0-1) 2-11-16												

- 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

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 2-11-16	Time 1600	Received By <i>[Signature]</i>	Company TA	Date 2/11/16	Time 1600
Relinquished By <i>[Signature]</i>	Company TA	Date 2/11/16	Time 1735	Received By <i>[Signature]</i>	Company TA-CPE	Date 2/12/16	Time 0955
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

Matrix Key

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-7

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107558-12
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 3:24:48 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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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Receipt Checklists	13

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Job ID: 500-107558-12

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107558-12

Comments

No additional comments.

Receipt

The samples were received on 2/13/2016 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.8° C, 3.5° C, 3.6° C, 4.2° C and 4.7° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323593: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 500-323593 recovered outside control limits for the following analyte: Chloroethane.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The instrument blank for analytical batch 500-323716 contained Iron greater than the reporting limit (RL), and were not reanalyzed because the laboratory blank (LB), and bracketing continuing calibration blank (CCB) solutions all had results below the RL. The data have been qualified and reported.

Method(s) 6010B: The continuing calibration blank (CCB) for 500-324314 contained Magnesium above the reporting limit (RL). Associated sample 3011-84-B01 (0-1) (500-107558-24) was not re-analyzed because results were greater than 10X the value found in the CCB.

Method(s) 6010B: The method blank for preparation batch 500-323727 and analytical batch 500-324314 contained Calcium above the reporting limit (RL). Associated sample 3011-84-B01 (0-1) (500-107558-24) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Client Sample ID: 3011-84-B01 (0-1)

Lab Sample ID: 500-107558-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.058		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.040	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.15		0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.069		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.095		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.17		0.040	0.0087	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.062		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.094		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.064		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.083		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.5		0.59	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	31		0.59	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.40		0.24	0.051	mg/Kg	1	☼	6010B	Total/NA
Boron	6.1		3.0	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.063	J	0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	69000		120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	19		0.59	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.9		0.30	0.067	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.59	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	16000		120	46	mg/Kg	10	☼	6010B	Total/NA
Lead	88		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	35000	^	5.9	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	410		0.59	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.59	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	980		30	4.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		59	7.8	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.30	0.086	mg/Kg	1	☼	6010B	Total/NA
Zinc	57		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.28	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.80		0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.0094		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	0.91		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	2.3		0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.043		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.20		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.83		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107558-24	3011-84-B01 (0-1)	Solid	02/12/16 15:55	02/13/16 08:00

1

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Client Sample ID: 3011-84-B01 (0-1)

Lab Sample ID: 500-107558-24

Date Collected: 02/12/16 15:55

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0032	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Benzene	<0.0041		0.0041	0.00092	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Bromodichloromethane	<0.0041		0.0041	0.00070	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Bromoform	<0.0041		0.0041	0.00084	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Bromomethane	<0.0041	*	0.0041	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
2-Butanone (MEK)	<0.0041		0.0041	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Carbon disulfide	<0.0041		0.0041	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Carbon tetrachloride	<0.0041		0.0041	0.00088	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Chlorobenzene	<0.0041		0.0041	0.00098	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Chloroethane	<0.0041	*	0.0041	0.0017	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Chloroform	<0.0041		0.0041	0.00081	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Chloromethane	<0.0041		0.0041	0.00099	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
cis-1,2-Dichloroethene	<0.0041		0.0041	0.00084	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
cis-1,3-Dichloropropene	<0.0041		0.0041	0.00094	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Dibromochloromethane	<0.0041		0.0041	0.00048	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,1-Dichloroethane	<0.0041		0.0041	0.00085	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,2-Dichloroethane	<0.0041		0.0041	0.00061	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,1-Dichloroethene	<0.0041		0.0041	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,2-Dichloropropane	<0.0041		0.0041	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,3-Dichloropropane, Total	<0.0041		0.0041	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Ethylbenzene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Methylene Chloride	<0.0041		0.0041	0.0031	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.00085	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Methyl tert-butyl ether	<0.0041		0.0041	0.00098	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Styrene	<0.0041		0.0041	0.00097	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,1,2,2-Tetrachloroethane	<0.0041		0.0041	0.00066	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Tetrachloroethene	<0.0041		0.0041	0.00086	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Toluene	<0.0041		0.0041	0.0014	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
trans-1,2-Dichloroethene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
trans-1,3-Dichloropropene	<0.0041		0.0041	0.0012	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,1,1-Trichloroethane	<0.0041		0.0041	0.00096	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
1,1,2-Trichloroethane	<0.0041		0.0041	0.00080	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Trichloroethene	<0.0041		0.0041	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Vinyl acetate	<0.0041		0.0041	0.0011	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Vinyl chloride	<0.0041		0.0041	0.00098	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1
Xylenes, Total	<0.0083		0.0083	0.0015	mg/Kg	☼	02/13/16 09:15	02/20/16 03:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/13/16 09:15	02/20/16 03:55	1
Dibromofluoromethane	109		75 - 120	02/13/16 09:15	02/20/16 03:55	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 134	02/13/16 09:15	02/20/16 03:55	1
Toluene-d8 (Surr)	106		75 - 122	02/13/16 09:15	02/20/16 03:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.089	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Client Sample ID: 3011-84-B01 (0-1)

Lab Sample ID: 500-107558-24

Date Collected: 02/12/16 15:55

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 82.1

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	0.048	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2-Methylnaphthalene	<0.040		0.040	0.0074	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Fluorene	<0.040		0.040	0.0056	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Pentachlorophenol	<0.81		0.81	0.64	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Phenanthrene	0.058		0.040	0.0056	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Anthracene	0.011 J		0.040	0.0067	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Fluoranthene	0.15		0.040	0.0074	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Pyrene	0.20		0.040	0.0080	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Benzo[a]anthracene	0.069		0.040	0.0054	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Client Sample ID: 3011-84-B01 (0-1)

Lab Sample ID: 500-107558-24

Date Collected: 02/12/16 15:55

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.095		0.040	0.011	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Benzo[b]fluoranthene	0.17		0.040	0.0087	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Benzo[k]fluoranthene	0.062		0.040	0.012	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Benzo[a]pyrene	0.094		0.040	0.0078	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Indeno[1,2,3-cd]pyrene	0.064		0.040	0.010	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0077	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
Benzo[g,h,i]perylene	0.083		0.040	0.013	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	02/17/16 07:25	02/25/16 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	86		25 - 110	02/17/16 07:25	02/25/16 15:34	1
Phenol-d5	63		31 - 110	02/17/16 07:25	02/25/16 15:34	1
Nitrobenzene-d5	82		25 - 115	02/17/16 07:25	02/25/16 15:34	1
2-Fluorobiphenyl	74		25 - 119	02/17/16 07:25	02/25/16 15:34	1
2,4,6-Tribromophenol	70		35 - 137	02/17/16 07:25	02/25/16 15:34	1
Terphenyl-d14	140	X	36 - 134	02/17/16 07:25	02/25/16 15:34	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Arsenic	5.5		0.59	0.27	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Barium	31		0.59	0.11	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Beryllium	0.40		0.24	0.051	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Boron	6.1		3.0	0.41	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Cadmium	0.063	J	0.12	0.034	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Calcium	69000		120	38	mg/Kg	☼	02/20/16 11:33	02/24/16 18:15	10
Chromium	19		0.59	0.10	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Cobalt	6.9		0.30	0.067	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Copper	17		0.59	0.13	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Iron	16000		120	46	mg/Kg	☼	02/20/16 11:33	02/24/16 18:15	10
Lead	88		0.30	0.15	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Magnesium	35000	^	5.9	2.4	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Manganese	410		0.59	0.12	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Nickel	17		0.59	0.16	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Potassium	980		30	4.8	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Selenium	<0.59		0.59	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Silver	<0.30		0.30	0.069	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Sodium	1100		59	7.8	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Vanadium	18		0.30	0.086	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1
Zinc	57		1.2	0.37	mg/Kg	☼	02/20/16 11:33	02/24/16 14:12	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.28	J	0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:53	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 16:26	02/19/16 23:53	1
Boron	0.80		0.50	0.050	mg/L		02/18/16 16:26	02/19/16 23:53	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Client Sample ID: 3011-84-B01 (0-1)

Lab Sample ID: 500-107558-24

Date Collected: 02/12/16 15:55

Matrix: Solid

Date Received: 02/13/16 08:00

Percent Solids: 82.1

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		02/18/16 16:26	02/19/16 23:53	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:53	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:53	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 16:26	02/19/16 23:53	1
Lead	0.0094		0.0075	0.0075	mg/L		02/18/16 16:26	02/19/16 23:53	1
Manganese	0.91		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:53	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:53	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 16:26	02/19/16 23:53	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 16:26	02/19/16 23:53	1
Zinc	2.3		0.50	0.020	mg/L		02/18/16 16:26	02/19/16 23:53	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.043		0.0075	0.0075	mg/L		02/18/16 16:28	02/19/16 15:17	1
Manganese	0.20		0.025	0.010	mg/L		02/18/16 16:28	02/19/16 15:17	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		02/18/16 16:26	02/19/16 15:35	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/18/16 16:26	02/19/16 15:35	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		02/18/16 16:45	02/19/16 14:44	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.018	0.0095	mg/Kg	☼	02/18/16 16:00	02/19/16 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.83		0.200	0.200	SU			02/19/16 00:28	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107558-12

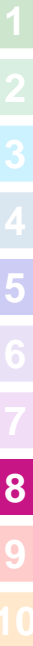
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 # 500-107558

Chain of Custody Number: _____

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				Parameter											
Project Location/State		Lab Project #													
Sampler		Lab PM													
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix							Comments		
			Date	Time											
<u>2/12/16</u>		<u>3011-64-B01(01)</u>	<u>2/12/16</u>	<u>1555</u>	<u>2</u>	<u>S</u>	<u>Voc</u>	<u>Suoc</u>	<u>TOT TAC</u>	<u>Metal</u>	<u>TCAP/SP</u>	<u>TAC mg/L</u>	<u>P H/g Solid</u>		

Turnaround Time Required (Business Days)

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

Sample Disposal

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

Relinquished By <u>[Signature]</u>	Company <u>EA</u>	Date <u>2/12/16</u>	Time <u>1605</u>	Received By <u>[Signature]</u>	Company <u>EA</u>	Date <u>2/12/16</u>	Time <u>1605</u>
Relinquished By <u>P. New</u>	Company <u>EA</u>	Date <u>2/12/16</u>	Time <u>1815</u>	Received By <u>[Signature]</u>	Company <u>EA</u>	Date <u>2/13/16</u>	Time <u>0800</u>

Lab Courier: _____
 Shipped: _____
 Hand Delivered: _____

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

Client Comments: _____

Lab Comments: _____



Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107558-12

Login Number: 107558

List Source: TestAmerica Chicago

List Number: 1

Creator: James, Jeff A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.5,3.6,4.7,4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
40W 815-937 Elodie Drive ISGS #3011-85 (5 Residences)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.90666877 Longitude: -88.41310659
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)Latitude: 41.90666877 Longitude: -88.41310659Uncontaminated 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 3011-85-B01 and 3011-80-B05 was sampled within the construction zone adjacent to ISGS #3011-85 (5 Residences). Refer to PSI Report for ISGS #3011-85 (5 Residences) including Table 4-4, and Figures 4-12A&B.

- 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 J107509-6, and J107509-4.

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.

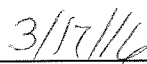
Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

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

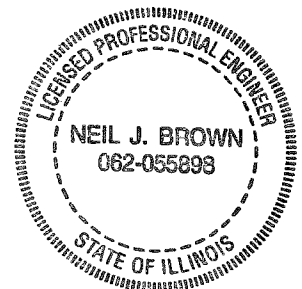
Printed Name:



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-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A
CONTAMINANTS OF CONCERN

SITE	ISGS #3011-85 (5 Residences)	Comparison Criteria			
BORING	3011-85-B01	MACs			TACO
SAMPLE	3011-85-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.9				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	0.0072 J	12,000	--	--	--
Benzo[a]anthracene	0.057	0.9	1.8	1.1	--
Benzo[a]pyrene	0.083	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.19	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.15	--	--	--	--
Benzo[k]fluoranthene	0.088	9	--	--	--
Chrysene	0.094	88	--	--	--
Fluoranthene	0.089	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.1	0.9	1.6	0.9	--
Phenanthrene	0.038	--	--	--	--
Pyrene	0.22	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	3.5 J	11.3	13	--	--
Barium	17	1,500	--	--	--
Beryllium	0.27	22	--	--	--
Boron	6.8	40	--	--	--
Cadmium	0.033 J	5.2	--	--	--
Calcium	120,000	--	--	--	--
Chromium	8.7	21	--	--	--
Cobalt	4.4 J	20	--	--	--
Copper	12	2,900	--	--	--
Iron	7,800	15,000	15,900	--	--
Lead	16 J	107	--	--	--
Magnesium	68,000	325,000	--	--	--
Manganese	250	630	636	--	--
Mercury	0.012 J	0.89	--	--	--
Nickel	10 J	100	--	--	--
Potassium	760 J	--	--	--	--
Sodium	620	--	--	--	--
Vanadium	10	550	--	--	--
Zinc	39 J	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.22 J	--	--	--	2
Boron	0.56	--	--	--	2
Manganese	0.82 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.08	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-80 (View Hill Farm)	Comparison Criteria			
BORING	3011-80-B05	MACs			TACO
SAMPLE	3011-80-B05 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.95				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthylene	0.0079 J	--	--	--	--
Anthracene	0.015 J	12,000	--	--	--
Benzo[a]anthracene	0.11	0.9	1.8	1.1	--
Benzo[a]pyrene	0.14 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.26	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.13	--	--	--	--
Benzo[k]fluoranthene	0.11	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	46	--	--	--
Chrysene	0.17	88	--	--	--
Dibenzo(a,h)anthracene	ND U	0.09	0.42	0.2	--
Fluoranthene	0.2	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.1	0.9	1.6	0.9	--
Phenanthrene	0.1	--	--	--	--
Pyrene	0.38	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	3.4	11.3	13	--	--
Barium	27	1,500	--	--	--
Beryllium	0.29	22	--	--	--
Boron	9.4	40	--	--	--
Cadmium	0.05 J	5.2	--	--	--
Calcium	140,000	--	--	--	--
Chromium	11	21	--	--	--
Cobalt	4.3	20	--	--	--
Copper	11	2,900	--	--	--
Iron	8,300	15,000	15,900	--	--
Lead	32	107	--	--	--
Magnesium	79,000	325,000	--	--	--
Manganese	310	630	636	--	--
Mercury	0.012 J	0.89	--	--	--
Nickel	9.5	100	--	--	--
Potassium	790	--	--	--	--
Selenium	ND U	1.3	--	--	--
Sodium	660	--	--	--	--
Vanadium	13	550	--	--	--
Zinc	38	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.32 J	--	--	--	2
Boron	0.1 J	--	--	--	2
Lead	ND U	--	--	--	0.0075
Manganese	0.83 L	--	--	--	0.15
Zinc	0.44 J	--	--	--	5
SPLP Metals (mg/L)					
Lead	NA	--	--	--	0.0075
Manganese	0.099	--	--	--	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: 500-107509-4
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:48:50 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Job ID: 500-107509-4

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-4

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-80-B05 (0-1) (500-107509-6), 3011-80-B04 (0-1) (500-107509-7), 3011-80-B03 (0-1) (500-107509-8), 3011-80-B02 (0-1) (500-107509-9), 3011-80-B01 (0-1) (500-107509-10), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS) and (500-107509-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-324053 recovered above the upper control limit for Silver. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-80-B05 (0-1) (500-107509-6), 3011-80-B04 (0-1) (500-107509-7), 3011-80-B03 (0-1) (500-107509-8), 3011-80-B02 (0-1) (500-107509-9), 3011-80-B01 (0-1) (500-107509-10) and (500-107509-E-1-D).

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0079	J	0.040	0.0053	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.10		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.20		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.38		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.11		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.17		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.26		0.040	0.0087	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.11		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.14		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.10		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.4		0.60	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	27		0.60	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.24	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	9.4		3.0	0.42	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.050	J	0.12	0.035	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000	B	120	39	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.60	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.3		0.30	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.60	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	8300		12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	32		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	79000	B	60	24	mg/Kg	10	☼	6010B	Total/NA
Manganese	310		0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.5		0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	790		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	660		60	7.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.30	0.088	mg/Kg	1	☼	6010B	Total/NA
Zinc	38		1.2	0.38	mg/Kg	1	☼	6010B	Total/NA
Barium	0.32	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.10	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.83		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.44	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.099		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.021	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.95		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-6	3011-80-B05 (0-1)	Solid	02/11/16 14:40	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.026		0.026	0.0051	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Benzene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Bromodichloromethane	<0.0066		0.0066	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Bromoform	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Bromomethane	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
2-Butanone (MEK)	<0.0066		0.0066	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Carbon disulfide	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Carbon tetrachloride	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chlorobenzene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chloroethane	<0.0066		0.0066	0.0028	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chloroform	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Chloromethane	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
cis-1,2-Dichloroethene	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
cis-1,3-Dichloropropene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Dibromochloromethane	<0.0066		0.0066	0.00075	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1-Dichloroethane	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,2-Dichloroethane	<0.0066		0.0066	0.00097	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1-Dichloroethene	<0.0066		0.0066	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,2-Dichloropropane	<0.0066		0.0066	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,3-Dichloropropane, Total	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Ethylbenzene	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
2-Hexanone	<0.0066		0.0066	0.0020	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Methylene Chloride	<0.0066		0.0066	0.0050	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
4-Methyl-2-pentanone (MIBK)	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Methyl tert-butyl ether	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Styrene	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1,2,2-Tetrachloroethane	<0.0066		0.0066	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Tetrachloroethene	<0.0066		0.0066	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Toluene	<0.0066		0.0066	0.0023	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
trans-1,2-Dichloroethene	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
trans-1,3-Dichloropropene	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1,1-Trichloroethane	<0.0066		0.0066	0.0015	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
1,1,2-Trichloroethane	<0.0066		0.0066	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Trichloroethene	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Vinyl acetate	<0.0066		0.0066	0.0018	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Vinyl chloride	<0.0066		0.0066	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1
Xylenes, Total	<0.013		0.013	0.0024	mg/Kg	☼	02/12/16 09:20	02/18/16 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 122	02/12/16 09:20	02/18/16 18:04	1
Dibromofluoromethane	95		75 - 120	02/12/16 09:20	02/18/16 18:04	1
1,2-Dichloroethane-d4 (Surr)	86		70 - 134	02/12/16 09:20	02/18/16 18:04	1
Toluene-d8 (Surr)	101		75 - 122	02/12/16 09:20	02/18/16 18:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.090	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
1,3-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
N-Nitrosodi-n-propylamine	<0.082		0.082	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachloroethane	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachlorobutadiene	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dichlorophenol	<0.40		0.40	0.096	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Chloroaniline	<0.82		0.82	0.19	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachlorocyclopentadiene	<0.82		0.82	0.23	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Methylnaphthalene	<0.040		0.040	0.0074	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Chloronaphthalene	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,6-Dinitrotoluene	<0.20		0.20	0.080	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2-Nitrophenol	<0.40		0.40	0.096	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dinitrophenol	<0.82		0.82	0.71	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Acenaphthylene	0.0079	J	0.040	0.0053	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Acenaphthene	<0.040		0.040	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Nitrophenol	<0.82		0.82	0.39	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Hexachlorobenzene	<0.082		0.082	0.0094	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Diethyl phthalate	<0.20		0.20	0.069	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Pentachlorophenol	<0.82		0.82	0.65	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
4,6-Dinitro-2-methylphenol	<0.82		0.82	0.33	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Phenanthrene	0.10		0.040	0.0056	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Anthracene	0.015	J	0.040	0.0068	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Fluoranthene	0.20		0.040	0.0075	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Pyrene	0.38		0.040	0.0080	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Butyl benzyl phthalate	<0.20		0.20	0.077	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[a]anthracene	0.11		0.040	0.0054	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.17		0.040	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.057	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[b]fluoranthene	0.26		0.040	0.0087	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[k]fluoranthene	0.11		0.040	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[a]pyrene	0.14		0.040	0.0078	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Indeno[1,2,3-cd]pyrene	0.10		0.040	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0078	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
Benzo[g,h,i]perylene	0.13		0.040	0.013	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1
3 & 4 Methylphenol	<0.20		0.20	0.068	mg/Kg	☼	02/16/16 07:05	02/23/16 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	99		25 - 110	02/16/16 07:05	02/23/16 22:45	1
Phenol-d5	92		31 - 110	02/16/16 07:05	02/23/16 22:45	1
Nitrobenzene-d5	81		25 - 115	02/16/16 07:05	02/23/16 22:45	1
2-Fluorobiphenyl	76		25 - 119	02/16/16 07:05	02/23/16 22:45	1
2,4,6-Tribromophenol	53		35 - 137	02/16/16 07:05	02/23/16 22:45	1
Terphenyl-d14	183	X	36 - 134	02/16/16 07:05	02/23/16 22:45	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Arsenic	3.4		0.60	0.28	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Barium	27		0.60	0.11	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Beryllium	0.29		0.24	0.052	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Boron	9.4		3.0	0.42	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Cadmium	0.050	J	0.12	0.035	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Calcium	140000	B	120	39	mg/Kg	☼	02/17/16 15:16	02/22/16 23:18	10
Chromium	11	B	0.60	0.10	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1
Cobalt	4.3		0.30	0.068	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Copper	11		0.60	0.13	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1
Iron	8300		12	4.6	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Lead	32		0.30	0.15	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Magnesium	79000	B	60	24	mg/Kg	☼	02/17/16 15:16	02/22/16 23:18	10
Manganese	310		0.60	0.12	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Nickel	9.5		0.60	0.16	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Potassium	790		30	4.9	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Selenium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Silver	<0.30	^	0.30	0.070	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Sodium	660		60	7.9	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 15:16	02/22/16 21:35	1
Vanadium	13		0.30	0.088	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1
Zinc	38		1.2	0.38	mg/Kg	☼	02/17/16 15:16	02/23/16 15:05	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.32	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:25	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/16/16 14:27	02/21/16 13:25	1
Boron	0.10	J	0.50	0.050	mg/L		02/16/16 14:27	02/21/16 13:25	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Client Sample ID: 3011-80-B05 (0-1)

Lab Sample ID: 500-107509-6

Date Collected: 02/11/16 14:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.0

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	-	02/16/16 14:27	02/21/16 13:25	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Iron	<0.40		0.40	0.20	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Manganese	0.83		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Silver	<0.025		0.025	0.010	mg/L	-	02/16/16 14:27	02/21/16 13:25	1
Zinc	0.44	J	0.50	0.020	mg/L	-	02/16/16 14:27	02/21/16 13:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.099		0.025	0.010	mg/L	-	02/17/16 08:31	02/20/16 00:49	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	-	02/16/16 14:27	02/17/16 20:56	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/16/16 14:27	02/17/16 20:56	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/17/16 16:15	02/18/16 11:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.021	0.011	mg/Kg	☼	02/18/16 16:00	02/19/16 10:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.95		0.200	0.200	SU	-		02/13/16 10:47	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

Qualifiers

GC/MS Semi VOA

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

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC 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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-4

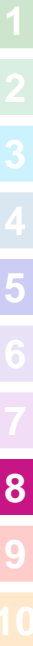
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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: _____
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 E-Mail: _____

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

Chain of Custody Record

Lab Job #: 500-107509
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Sampler		Lab Project #		Lab PM		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
EE		10093410005-01						S. Cooper		5011864		P. Wright		
Project Name		Project Location/State		# of Containers		Matrix		Date		Time		Comments		
6	MS/MSD	3011-80-B05 (01)	2/11/16	1440	2	S	Voc	X	X	X	X	X		
7		3011-80-B04 (01)	2/11/16	1450	2	S	Success	X	X	X	X	X		
8		3011-80-B03 (01)	2/11/16	1455	2	S	2011 TAP	X	X	X	X	X		
9		3011-80-B02 (01)	2/11/16	1500	2	S	TAP/SAP	X	X	X	X	X		
10		3011-80-B01 (01)	2/11/16	1570	2	S	TAP	X	X	X	X	X		
2/11/16														

Turnaround Time Required (Business Days)

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

Sample Disposal

Return to Client

Disposal by Lab

Archive for ___ Months

(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <i>[Signature]</i>	Company CE	Date 2/11/16	Time 1600	Received By <i>[Signature]</i>	Company VA	Date 2/11/16	Time 1600
Relinquished By <i>[Signature]</i>	Company VA	Date 2/11/16	Time 1735	Received By <i>[Signature]</i>	Company TA-CART	Date 2/12/16	Time 0755
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

Matrix Key

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-4

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107509-6
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:51:13 AM
Jodie Bracken, Project Management Assistant II
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Designee for
Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

LINKS

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results through
TotalAccess

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Job ID: 500-107509-6

Laboratory: TestAmerica Chicago

Narrative

**Job Narrative
500-107509-6**

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323422: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-85-B01 (0-1) (500-107509-16), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS) and (500-107509-E-1-C MSD). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated sample 3011-85-B01 (0-1) (500-107509-16) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated sample 3011-85-B01 (0-1) (500-107509-16) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Client Sample ID: 3011-85-B01 (0-1)

Lab Sample ID: 500-107509-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.038		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0072	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.089		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.22		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.057		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.094		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.19		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.088		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.083		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.10		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.15		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.5		0.43	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	17		0.43	0.080	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.17	0.038	mg/Kg	1	☼	6010B	Total/NA
Boron	6.8		2.2	0.30	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.033	J	0.087	0.025	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	87	28	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.7	B	0.43	0.075	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.4		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.43	0.094	mg/Kg	1	☼	6010B	Total/NA
Iron	7800	B	8.7	3.3	mg/Kg	1	☼	6010B	Total/NA
Lead	16	F1	0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	68000	B	43	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	250		0.43	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.43	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	760	F1	22	3.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	620		43	5.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.22	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	39	F1	0.87	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	0.22	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.56		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.82		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.094	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.080		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.017	0.0088	mg/Kg	1	☼	7471B	Total/NA
pH	8.90		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-16	3011-85-B01 (0-1)	Solid	02/11/16 14:35	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Client Sample ID: 3011-85-B01 (0-1)

Lab Sample ID: 500-107509-16

Date Collected: 02/11/16 14:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Benzene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Bromodichloromethane	<0.0050		0.0050	0.00085	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Bromoform	<0.0050		0.0050	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Bromomethane	<0.0050		0.0050	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
2-Butanone (MEK)	<0.0050		0.0050	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Carbon disulfide	<0.0050		0.0050	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Carbon tetrachloride	<0.0050		0.0050	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Chlorobenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Chloroethane	<0.0050		0.0050	0.0021	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Chloroform	<0.0050		0.0050	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Chloromethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
cis-1,2-Dichloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
cis-1,3-Dichloropropene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Dibromochloromethane	<0.0050		0.0050	0.00058	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,1-Dichloroethane	<0.0050		0.0050	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,2-Dichloroethane	<0.0050		0.0050	0.00074	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,1-Dichloroethene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,2-Dichloropropane	<0.0050		0.0050	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,3-Dichloropropane, Total	<0.0050		0.0050	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Ethylbenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Methylene Chloride	<0.0050		0.0050	0.0038	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Methyl tert-butyl ether	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Styrene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,1,2,2-Tetrachloroethane	<0.0050		0.0050	0.00080	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Tetrachloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Toluene	<0.0050		0.0050	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
trans-1,2-Dichloroethene	<0.0050		0.0050	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
trans-1,3-Dichloropropene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,1,1-Trichloroethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
1,1,2-Trichloroethane	<0.0050		0.0050	0.00097	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Trichloroethene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Vinyl acetate	<0.0050		0.0050	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Vinyl chloride	<0.0050		0.0050	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 00:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 122	02/12/16 09:20	02/19/16 00:18	1
Dibromofluoromethane	96		75 - 120	02/12/16 09:20	02/19/16 00:18	1
1,2-Dichloroethane-d4 (Surr)	89		70 - 134	02/12/16 09:20	02/19/16 00:18	1
Toluene-d8 (Surr)	103		75 - 122	02/12/16 09:20	02/19/16 00:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.082	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Client Sample ID: 3011-85-B01 (0-1)

Lab Sample ID: 500-107509-16

Date Collected: 02/11/16 14:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.6

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	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Nitrobenzene	<0.036		0.036	0.0092	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Naphthalene	<0.036		0.036	0.0057	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,4,5-Trichlorophenol	<0.36		0.36	0.084	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2-Methylnaphthalene	<0.036		0.036	0.0068	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2-Chloronaphthalene	<0.18		0.18	0.041	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2-Nitrophenol	<0.36		0.36	0.087	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Fluorene	<0.036		0.036	0.0052	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Phenanthrene	0.038		0.036	0.0051	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Anthracene	0.0072 J		0.036	0.0061	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Fluoranthene	0.089		0.036	0.0068	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Pyrene	0.22		0.036	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Benzo[a]anthracene	0.057		0.036	0.0049	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Client Sample ID: 3011-85-B01 (0-1)

Lab Sample ID: 500-107509-16

Date Collected: 02/11/16 14:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.094		0.036	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Benzo[b]fluoranthene	0.19		0.036	0.0079	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Benzo[k]fluoranthene	0.088		0.036	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Benzo[a]pyrene	0.083		0.036	0.0071	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Indeno[1,2,3-cd]pyrene	0.10		0.036	0.0095	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
Benzo[g,h,i]perylene	0.15		0.036	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/16/16 07:05	02/23/16 05:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	99		25 - 110	02/16/16 07:05	02/23/16 05:26	1
Phenol-d5	91		31 - 110	02/16/16 07:05	02/23/16 05:26	1
Nitrobenzene-d5	83		25 - 115	02/16/16 07:05	02/23/16 05:26	1
2-Fluorobiphenyl	82		25 - 119	02/16/16 07:05	02/23/16 05:26	1
2,4,6-Tribromophenol	76		35 - 137	02/16/16 07:05	02/23/16 05:26	1
Terphenyl-d14	215	X	36 - 134	02/16/16 07:05	02/23/16 05:26	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.87	F1	0.87	0.18	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Arsenic	3.5		0.43	0.20	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Barium	17		0.43	0.080	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Beryllium	0.27		0.17	0.038	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Boron	6.8		2.2	0.30	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Cadmium	0.033	J	0.087	0.025	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Calcium	120000	B	87	28	mg/Kg	☼	02/18/16 09:48	02/23/16 21:55	10
Chromium	8.7	B	0.43	0.075	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Cobalt	4.4		0.22	0.049	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Copper	12		0.43	0.094	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Iron	7800	B	8.7	3.3	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Lead	16	F1	0.22	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Magnesium	68000	B	43	18	mg/Kg	☼	02/18/16 09:48	02/23/16 00:06	10
Manganese	250		0.43	0.086	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Nickel	10		0.43	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Potassium	760	F1	22	3.5	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Selenium	<0.43		0.43	0.22	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Silver	<0.22		0.22	0.051	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Sodium	620		43	5.7	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Thallium	<0.43		0.43	0.21	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Vanadium	10		0.22	0.063	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1
Zinc	39	F1	0.87	0.28	mg/Kg	☼	02/18/16 09:48	02/21/16 07:20	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.22	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 06:16	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 06:16	1
Boron	0.56		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 06:16	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Client Sample ID: 3011-85-B01 (0-1)

Lab Sample ID: 500-107509-16

Date Collected: 02/11/16 14:35

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.6

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		02/18/16 08:47	02/19/16 06:16	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:16	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:16	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 06:16	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 06:16	1
Manganese	0.82		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:16	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:16	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 06:16	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:16	1
Zinc	0.094	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 06:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.080		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 07:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 17:04	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 17:04	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 12:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.017	0.0088	mg/Kg	☼	02/18/16 16:00	02/19/16 11:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.90		0.200	0.200	SU			02/13/16 11:13	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-6

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Sampler		Lab Project #		Lab PM		Preservative Key
EE		1009241-0008.01						S. Cooper		50011864		D. Wright		
Lab ID	M/S/MSD	Sample ID	Date	Time	# of Containers	Matrix								Comments
16		311-85-Bul(6-1)	2-11-16	1435	2	S	VUC	SUC	TOH TALK	TOH TALK	TOH TALK	TOH TALK	TOH TALK	

- 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>EE</u>	Company: <u>EA</u>	Date: <u>2/11/16</u>	Time: <u>1600</u>	Received By: <u>P. N. ...</u>	Company: <u>EA</u>	Date: <u>2/11/16</u>	Time: <u>1600</u>
Relinquished By: <u>P. N. ...</u>	Company: <u>EA</u>	Date: <u>2/11/16</u>	Time: <u>1735</u>	Received By: <u>Sherrill ...</u>	Company: <u>EA-CHE</u>	Date: <u>2/12/16</u>	Time: <u>0755</u>

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments: _____

Lab Comments: _____

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-6

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
40W 467 IL 38 ISGS #3011-89 (Johnson's Farm and Country Store)

City: Elburn State: IL Zip Code: 60119

County: Kane Township: Campton

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

Latitude: 41.90569 Longitude: -88.39914
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90569 Longitude: -88.39914

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 3011-89-B01 was sampled within the construction zone adjacent to ISGS #3011-89 (Johnson's Farm and Country Store). Refer to PSI Report for ISGS #3011-89 (Johnson's Farm and Country Store) including Table 4-4, and Figures 4-12A&B and 4-13A&B.

- 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 J107509-7.

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:

3/17/16
 Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A
CONTAMINANTS OF CONCERN**

SITE	ISGS #3011-89 (Johnson's Farm and Country Store)	Comparison Criteria			
BORING	3011-89-B01	MACs			TACO
SAMPLE	3011-89-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.91				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	0.0083 J	12,000	--	--	--
Benzo[a]anthracene	0.065	0.9	1.8	1.1	--
Benzo[a]pyrene	0.1 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.2	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.13	--	--	--	--
Benzo[k]fluoranthene	0.093	9	--	--	--
Chrysene	0.11	88	--	--	--
Fluoranthene	0.11	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.092	0.9	1.6	0.9	--
Phenanthrene	0.059	--	--	--	--
Pyrene	0.26	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	4.9	11.3	13	--	--
Barium	81	1,500	--	--	--
Beryllium	0.43	22	--	--	--
Boron	3.9	40	--	--	--
Calcium	55,000	--	--	--	--
Chromium	13	21	--	--	--
Cobalt	6.8	20	--	--	--
Copper	12	2,900	--	--	--
Iron	13,000	15,000	15,900	--	--
Lead	25	107	--	--	--
Magnesium	28,000	325,000	--	--	--
Manganese	320	630	636	--	--
Mercury	0.011 J	0.89	--	--	--
Nickel	12	100	--	--	--
Potassium	710	--	--	--	--
Sodium	1,800	--	--	--	--
Vanadium	23	550	--	--	--
Zinc	45	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.61	--	--	--	2
Boron	0.6	--	--	--	2
Manganese	1.2 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.46 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: 500-107509-7
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:51:48 AM
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Designee for
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LINKS

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Job ID: 500-107509-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-7

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323422: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-89-B01 (0-1) (500-107509-17), 3011-89-B02 (0-1) (500-107509-18), 3011-89-B03 (0-1) (500-107509-19), 3011-89-B04 (0-1) (500-107509-20), 3011-89-B05 (0-1) (500-107509-21), (MB 500-322967/1-A), (500-107509-E-1-A), (500-107509-E-1-B MS), (500-107509-E-1-C MSD), (500-107509-E-21-B MS) and (500-107509-E-21-C MS). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated samples 3011-89-B01 (0-1) (500-107509-17), 3011-89-B02 (0-1) (500-107509-18), 3011-89-B03 (0-1) (500-107509-19), 3011-89-B04 (0-1) (500-107509-20) and 3011-89-B05 (0-1) (500-107509-21) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated samples 3011-89-B01 (0-1) (500-107509-17), 3011-89-B02 (0-1) (500-107509-18), 3011-89-B03 (0-1) (500-107509-19), 3011-89-B04 (0-1) (500-107509-20) and 3011-89-B05 (0-1) (500-107509-21) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
 Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.059		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0083	J	0.039	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.11		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.26		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.065		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.11		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.093		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.092		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.9		0.53	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	81		0.53	0.098	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.43		0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	3.9		2.7	0.37	mg/Kg	1	☼	6010B	Total/NA
Calcium	55000	B	110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	13		0.53	0.092	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.8		0.27	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.53	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	25		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	28000		5.3	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	320		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	710		27	4.4	mg/Kg	1	☼	6010B	Total/NA
Sodium	1800		53	7.1	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.26	J	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23		0.27	0.078	mg/Kg	1	☼	6010B	Total/NA
Zinc	45		1.1	0.34	mg/Kg	1	☼	6010B	Total/NA
Barium	0.61		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.60		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.20	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.46		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.011	J	0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.91		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-17	3011-89-B01 (0-1)	Solid	02/11/16 11:25	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chloroform	<0.0046		0.0046	0.00090	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1-Dichloroethane	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Tetrachloroethene	<0.0046		0.0046	0.00096	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 00:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 122	02/12/16 09:20	02/19/16 00:43	1
Dibromofluoromethane	97		75 - 120	02/12/16 09:20	02/19/16 00:43	1
1,2-Dichloroethane-d4 (Surr)	89		70 - 134	02/12/16 09:20	02/19/16 00:43	1
Toluene-d8 (Surr)	102		75 - 122	02/12/16 09:20	02/19/16 00:43	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	☼	02/16/16 07:05	02/23/16 05:52	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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	☼	02/16/16 07:05	02/23/16 05:52	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Phenanthrene	0.059		0.039	0.0055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Anthracene	0.0083 J		0.039	0.0066	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Fluoranthene	0.11		0.039	0.0073	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Pyrene	0.26		0.039	0.0078	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[a]anthracene	0.065		0.039	0.0053	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.11		0.039	0.011	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[b]fluoranthene	0.20		0.039	0.0085	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[k]fluoranthene	0.093		0.039	0.012	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[a]pyrene	0.10		0.039	0.0076	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Indeno[1,2,3-cd]pyrene	0.092		0.039	0.010	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
Benzo[g,h,i]perylene	0.13		0.039	0.013	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:05	02/23/16 05:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	98		25 - 110	02/16/16 07:05	02/23/16 05:52	1
Phenol-d5	90		31 - 110	02/16/16 07:05	02/23/16 05:52	1
Nitrobenzene-d5	80		25 - 115	02/16/16 07:05	02/23/16 05:52	1
2-Fluorobiphenyl	80		25 - 119	02/16/16 07:05	02/23/16 05:52	1
2,4,6-Tribromophenol	79		35 - 137	02/16/16 07:05	02/23/16 05:52	1
Terphenyl-d14	225	X	36 - 134	02/16/16 07:05	02/23/16 05:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Arsenic	4.9		0.53	0.25	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Barium	81		0.53	0.098	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Beryllium	0.43		0.21	0.046	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Boron	3.9		2.7	0.37	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Cadmium	<0.11		0.11	0.031	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Calcium	55000	B	110	34	mg/Kg	☼	02/18/16 09:48	02/23/16 22:15	10
Chromium	13		0.53	0.092	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Cobalt	6.8		0.27	0.060	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Copper	12		0.53	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Iron	13000		11	4.1	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Lead	25		0.27	0.13	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Magnesium	28000		5.3	2.2	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Manganese	320		0.53	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Nickel	12		0.53	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Potassium	710		27	4.4	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Selenium	<0.53		0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Silver	<0.27		0.27	0.062	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Sodium	1800		53	7.1	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Thallium	0.26	J	0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Vanadium	23		0.27	0.078	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1
Zinc	45		1.1	0.34	mg/Kg	☼	02/18/16 09:48	02/21/16 07:53	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.61		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 06:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 06:43	1
Boron	0.60		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 06:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Client Sample ID: 3011-89-B01 (0-1)

Lab Sample ID: 500-107509-17

Date Collected: 02/11/16 11:25

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.4

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		02/18/16 08:47	02/19/16 06:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 06:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 06:43	1
Manganese	1.2		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 06:43	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 06:43	1
Zinc	0.20	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 06:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.46		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 07:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 17:20	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 17:20	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		02/17/16 16:15	02/18/16 12:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.91		0.200	0.200	SU			02/13/16 11:15	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-7

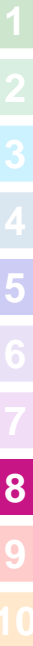
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other				
Project Name		Lab Project #		Matrix		Matrix		Comments						
Project Location/State		Lab PM		Matrix		Matrix								
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix	Matrix				
EE		10093M-0008-01												
IL 39														
Kane County, IL														
S Cooper														
17		3011-89-B01 (0-1)	2-11-16	1125	2	S	Voc	SOC	Total THC	TCAP/SPC1	THC mobile	pH/g Solids		
18		3011-89-B02 (0-1)	2-11-16	1135	2	S	X	X	X	X	X	X		
19		3011-89-B03 (0-1)	2-11-16	1140	2	S	X	X	X	X	X	X		
20		3011-89-B04 (0-1)	2-11-16	1145	2	S	X	X	X	X	X	X		
21		3011-89-B05 (0-1)	2-11-16	1150	2	S	X	X	X	X	X	X		
By 2-11-16														

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 EE	Date 2-11-16	Time 1600	Received By <u>[Signature]</u> Company TA	Date 2/11/16	Time 1600
Relinquished By <u>[Signature]</u> Company TA	Date 2/11/16	Time 1735	Received By <u>[Signature]</u> Company TA-CPE	Date 2/12/16	Time 0955
Relinquished By _____ Company _____ Date _____ Time _____	_____ Date _____ Time _____	_____ Date _____ Time _____	_____ Date _____ Time _____	_____ Date _____ Time _____	_____ Date _____ Time _____

Lab Courier: TA
Shipped: _____
Hand Delivered: _____

Matrix Key

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-7

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
39W 950 to 40W 450 blocks of IL 38 ISGS #3011-90 (Agricultural Land)

City: Elburn State: IL Zip Code: 60119/60175

County: Kane Township: Campton

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

Latitude: 41.905048 Longitude: -88.393297
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.905048 Longitude: -88.393297

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):

Locations (See Attachment A) were sampled within the construction zone adjacent to ISGS #3011-90 (Agricultural Land). Refer to PSI Report for ISGS #3011-90 (Agricultural Land) including Table 4-4, and Figures 4-12A&B and 4-13A&B.

- 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 J107509-8, and J107509-9.

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))

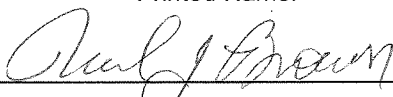
Company Name: Ecology and Environment, Inc.

Street Address: 33 West Monroe Street

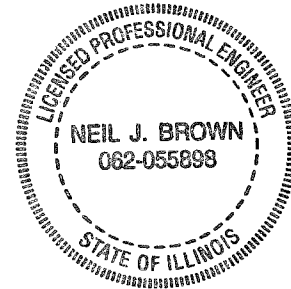
City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown
Printed Name:


Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:



Attachment A

ISGS# 3011-90 (Agricultural Land)

Analytical results from the sample point collected at adjacent property ISGS# 3011-91 was used to delineate areas of impact.

III (a)

Soil sample points:

- 3011-90-B01
- 3011-90-B02
- 3011-90-B06
- 3011-90-B07
- 3011-91-B01

III (b)

Lab packages with associated sample locations

J107509-8

- 3011-90-B01
- 3011-90-B02
- 3011-90-B06
- 3011-90-B07

J107509-9

- 3011-91-B01




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-90 (Agricultural Land)					Comparison Criteria			
	3011-90-B01	3011-90-B02	3011-90-B06		3011-90-B07	MACs			TACO
SAMPLE	3011-90-B01 (0-1)	3011-90-B02 (0-1)	3011-90-B06 (0-1)	3011-90-B06 (0-1)D	3011-90-B07 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil	Soil	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	0-1	0-1				
pH	8.9	8.84	8.95	9	8.51				
VOCs (None Detected)									
SVOCs (mg/kg)									
Acenaphthene	ND U	ND U	ND U	ND U	ND U	570	--	--	--
Acenaphthylene	0.0054 J	ND U	ND U	ND U	ND U	--	--	--	--
Anthracene	0.022 J	0.012 J	0.018 J	0.011 J	0.021 J	12,000	--	--	--
Benzo[a]anthracene	0.13	0.056	0.094	0.061	0.13	0.9	1.8	1.1	--
Benzo[a]pyrene	0.18 †	0.065	0.1 †	0.089	0.18 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.4	0.12	0.2	0.18	0.33	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.12	0.029 J	0.05	0.062	0.11	--	--	--	--
Benzo[k]fluoranthene	0.12	0.039	0.076	0.068	0.13	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.078 J	ND U	ND U	0.66	ND U	46	--	--	--
Chrysene	0.18	0.074	0.12	0.095	0.17	88	--	--	--
Dibenzo[a,h]anthracene	0.021 J	ND U	0.013 J	ND U	ND U	0.09	0.42	0.2	--
Fluoranthene	0.29	0.18	0.23	0.13	0.28	3,100	--	--	--
Fluorene	0.006 J	ND U	0.0097 J	ND U	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.13	0.033 J	0.056	0.054	0.1	0.9	1.6	0.9	--
Phenanthrene	0.11	0.066	0.15	0.052	0.11	--	--	--	--
Pyrene	0.44	0.12	0.32	0.18	0.45	2,300	--	--	--
Inorganics (mg/kg)									
Antimony	ND U	ND U	ND U	ND U	ND U	5	--	--	--
Arsenic	3.6	4.9	5.1	6.8	2.7	11.3	13	--	--
Barium	34	47	55	56	30	1,500	--	--	--
Beryllium	0.29	0.42	0.43	0.53	0.28	22	--	--	--
Boron	6.3	3.7	4.3	5.2	7.4	40	--	--	--
Cadmium	0.082 J	0.14	0.096 J	0.12 J	0.065 J	5.2	--	--	--
Calcium	120,000	54,000	46,000	37,000	140,000	--	--	--	--
Chromium	8.8	11	13	16	17	21	--	--	--
Cobalt	3.9	6.3	7.6	8.3	4.4	20	--	--	--
Copper	14	13	16	18	13	2,900	--	--	--
Iron	8,900	12,000	13,000	15,000	8,800	15,000	15,900	--	--
Lead	20	58	52	81	22	107	--	--	--
Magnesium	73,000	25,000	22,000	24,000	100,000	325,000	--	--	--
Manganese	270	410	390	430	360	630	636	--	--
Mercury	0.012 J	0.012 J	0.02	0.019	0.0095 J	0.89	--	--	--
Nickel	10	14	18	20	10	100	--	--	--
Potassium	550	650	870	990	570	--	--	--	--
Silver	0.12 J	ND U	0.066 J	ND U	0.17 J	4.4	--	--	--
Sodium	1,100	1,300	1,500	1,700	1,400	--	--	--	--
Thallium	ND U	ND U	ND U	ND U	ND U	2.6	--	--	--
Vanadium	12	16	19	23	13	550	--	--	--
Zinc	55	60	69	72	39	5,100	--	--	--
TCLP Metals (mg/L)									
Barium	0.38 J	0.39 J	0.41 J	0.37 J	0.59	--	--	--	2
Boron	0.73	0.58	0.53	0.55	0.65	--	--	--	2
Cobalt	ND U	ND U	ND U	ND U	0.012 J	--	--	--	1
Lead	ND U	ND U	ND U	0.0085 L	ND U	--	--	--	0.0075
Manganese	1.9 L	0.73 L	1.1 L	1.4 L	3.5 L	--	--	--	0.15
Nickel	ND U	ND U	ND U	ND U	0.015 J	--	--	--	0.1
Zinc	ND U	ND U	ND U	ND U	ND U	--	--	--	5
SPLP Metals (mg/L)									
Lead	NA	NA	NA	0.19 L	NA	--	--	--	0.0075
Manganese	0.38 L	0.75 L	0.88 L	0.54 L	0.49 L	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-91 (Farmstead)	Comparison Criteria			
		MACs			TACO
BORING	3011-91-B01				
SAMPLE	3011-91-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.89	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	0.013 J	12,000	--	--	--
Benzo[a]anthracene	0.057	0.9	1.8	1.1	--
Benzo[a]pyrene	0.062	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.12	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.028 J	--	--	--	--
Benzo[k]fluoranthene	0.045	9	--	--	--
Chrysene	0.078	88	--	--	--
Fluoranthene	0.17	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.031 J	0.9	1.6	0.9	--
Phenanthrene	0.078	--	--	--	--
Pyrene	0.13	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	4.7	11.3	13	--	--
Barium	53	1,500	--	--	--
Beryllium	0.41	22	--	--	--
Boron	4.5	40	--	--	--
Cadmium	0.26	5.2	--	--	--
Calcium	67,000	--	--	--	--
Chromium	14	21	--	--	--
Cobalt	6.5	20	--	--	--
Copper	18	2,900	--	--	--
Iron	12,000	15,000	15,900	--	--
Lead	160 †	107	--	--	--
Magnesium	29,000	325,000	--	--	--
Manganese	420	630	636	--	--
Mercury	0.029	0.89	--	--	--
Nickel	15	100	--	--	--
Potassium	690	--	--	--	--
Sodium	1,000	--	--	--	--
Vanadium	17	550	--	--	--
Zinc	97	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.44 J	--	--	--	2
Boron	0.71	--	--	--	2
Manganese	0.46 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.49 L	--	--	--	0.15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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TestAmerica Job ID: 500-107509-8
Client Project/Site: IDOT - IL 38 - WO 008

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LINKS

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

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

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Job ID: 500-107509-8

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-8

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323422: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-90-B08 (0-1) (500-107509-22), 3011-90-B06 (0-1) (500-107509-23), 3011-90-B06 (0-1)D (500-107509-24), 3011-90-B03 (0-1) (500-107509-25), 3011-90-B02 (0-1) (500-107509-26), 3011-90-B01 (0-1) (500-107509-27), 3011-90-B05 (0-1) (500-107509-29), 3011-90-B07 (0-1) (500-107509-30), 3011-90-B09 (0-1) (500-107509-31), 3011-90-B10 (0-1) (500-107509-32) and 3011-90-B11 (0-1) (500-107509-33). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated samples 3011-90-B06 (0-1) (500-107509-23), 3011-90-B06 (0-1)D (500-107509-24), 3011-90-B03 (0-1) (500-107509-25), 3011-90-B02 (0-1) (500-107509-26), 3011-90-B01 (0-1) (500-107509-27), 3011-90-B04 (0-1) (500-107509-28), 3011-90-B05 (0-1) (500-107509-29), 3011-90-B07 (0-1) (500-107509-30), 3011-90-B09 (0-1) (500-107509-31), 3011-90-B10 (0-1) (500-107509-32) and 3011-90-B11 (0-1) (500-107509-33) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated samples 3011-90-B08 (0-1) (500-107509-22), 3011-90-B06 (0-1) (500-107509-23), 3011-90-B06 (0-1)D (500-107509-24), 3011-90-B03 (0-1) (500-107509-25), 3011-90-B02 (0-1) (500-107509-26), 3011-90-B01 (0-1) (500-107509-27), 3011-90-B04 (0-1) (500-107509-28), 3011-90-B05 (0-1) (500-107509-29), 3011-90-B07 (0-1) (500-107509-30), 3011-90-B09 (0-1) (500-107509-31), 3011-90-B10 (0-1) (500-107509-32) and 3011-90-B11 (0-1) (500-107509-33) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-324079 and analytical batch 500-324233 contained Chromium above the reporting limit (RL). Associated sample 3011-90-B08 (0-1) (500-107509-22) was not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

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Client Sample ID: 3011-90-B06 (0-1)

Lab Sample ID: 500-107509-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Fluorene	0.0097	J	0.038	0.0054	mg/Kg	1	☼	☼	8270D	Total/NA
Phenanthrene	0.15		0.038	0.0054	mg/Kg	1	☼	☼	8270D	Total/NA
Anthracene	0.018	J	0.038	0.0064	mg/Kg	1	☼	☼	8270D	Total/NA
Fluoranthene	0.23		0.038	0.0071	mg/Kg	1	☼	☼	8270D	Total/NA
Pyrene	0.32		0.038	0.0076	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[a]anthracene	0.094		0.038	0.0052	mg/Kg	1	☼	☼	8270D	Total/NA
Chrysene	0.12		0.038	0.010	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.038	0.0083	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.076		0.038	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1) (Continued)

Lab Sample ID: 500-107509-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.10		0.038	0.0074	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	0.013	J	0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.050		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.1		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	55		0.50	0.091	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.43		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	4.3		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.096	J	0.099	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	46000	B	99	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	13		0.50	0.085	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.6		0.25	0.056	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		9.9	3.8	mg/Kg	1	☼	6010B	Total/NA
Lead	52		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	22000		5.0	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	390		0.50	0.098	mg/Kg	1	☼	6010B	Total/NA
Nickel	18		0.50	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	870		25	4.0	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.46	J	0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Silver	0.066	J	0.25	0.058	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500		50	6.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	19		0.25	0.072	mg/Kg	1	☼	6010B	Total/NA
Zinc	69		0.99	0.31	mg/Kg	1	☼	6010B	Total/NA
Barium	0.41	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.53		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.089	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.88		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.020		0.018	0.0096	mg/Kg	1	☼	7471B	Total/NA
pH	8.95		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-90-B06 (0-1)D

Lab Sample ID: 500-107509-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.052		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.18		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.061		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.095		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.66		0.21	0.075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.18		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.068		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.089		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.054		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.062		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.8		0.63	0.29	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.63	0.12	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.53		0.25	0.055	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)D (Continued)

Lab Sample ID: 500-107509-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.2		3.2	0.44	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.12	J	0.13	0.036	mg/Kg	1	☼	6010B	Total/NA
Calcium	37000		13	4.1	mg/Kg	1	☼	6010B	Total/NA
Chromium	16		0.63	0.11	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.3		0.32	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.63	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	15000		13	4.9	mg/Kg	1	☼	6010B	Total/NA
Lead	81		0.32	0.16	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000		6.3	2.6	mg/Kg	1	☼	6010B	Total/NA
Manganese	430		0.63	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	20		0.63	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	990		32	5.1	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		63	8.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23		0.32	0.092	mg/Kg	1	☼	6010B	Total/NA
Zinc	72		1.3	0.40	mg/Kg	1	☼	6010B	Total/NA
Barium	0.37	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.0085		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	1.4		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.21	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.19		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.54		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.019		0.019	0.0099	mg/Kg	1	☼	7471B	Total/NA
pH	9.00		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8



Client Sample ID: 3011-90-B02 (0-1)

Lab Sample ID: 500-107509-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Phenanthrene	0.066		0.039	0.0054	mg/Kg	1	*	*	8270D	Total/NA
Anthracene	0.012	J	0.039	0.0065	mg/Kg	1	*	*	8270D	Total/NA
Fluoranthene	0.18		0.039	0.0072	mg/Kg	1	*	*	8270D	Total/NA
Pyrene	0.12		0.039	0.0078	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]anthracene	0.056		0.039	0.0052	mg/Kg	1	*	*	8270D	Total/NA
Chrysene	0.074		0.039	0.011	mg/Kg	1	*	*	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.039	0.0084	mg/Kg	1	*	*	8270D	Total/NA
Benzo[k]fluoranthene	0.039		0.039	0.011	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]pyrene	0.065		0.039	0.0076	mg/Kg	1	*	*	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.033	J	0.039	0.010	mg/Kg	1	*	*	8270D	Total/NA
Benzo[g,h,i]perylene	0.029	J	0.039	0.013	mg/Kg	1	*	*	8270D	Total/NA
Arsenic	4.9		0.55	0.25	mg/Kg	1	*	*	6010B	Total/NA
Barium	47		0.55	0.10	mg/Kg	1	*	*	6010B	Total/NA
Beryllium	0.42		0.22	0.047	mg/Kg	1	*	*	6010B	Total/NA
Boron	3.7		2.7	0.38	mg/Kg	1	*	*	6010B	Total/NA
Cadmium	0.14		0.11	0.032	mg/Kg	1	*	*	6010B	Total/NA
Calcium	54000	B	110	35	mg/Kg	10	*	*	6010B	Total/NA
Chromium	11		0.55	0.094	mg/Kg	1	*	*	6010B	Total/NA
Cobalt	6.3		0.27	0.062	mg/Kg	1	*	*	6010B	Total/NA
Copper	13		0.55	0.12	mg/Kg	1	*	*	6010B	Total/NA
Iron	12000		11	4.2	mg/Kg	1	*	*	6010B	Total/NA
Lead	58		0.27	0.14	mg/Kg	1	*	*	6010B	Total/NA
Magnesium	25000		5.5	2.2	mg/Kg	1	*	*	6010B	Total/NA
Manganese	410		0.55	0.11	mg/Kg	1	*	*	6010B	Total/NA
Nickel	14		0.55	0.15	mg/Kg	1	*	*	6010B	Total/NA
Potassium	650		27	4.5	mg/Kg	1	*	*	6010B	Total/NA
Selenium	0.42	J	0.55	0.27	mg/Kg	1	*	*	6010B	Total/NA
Sodium	1300		55	7.2	mg/Kg	1	*	*	6010B	Total/NA
Vanadium	16		0.27	0.080	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B02 (0-1) (Continued)

Lab Sample ID: 500-107509-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	60		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.58		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.73		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.26	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.75		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.84		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-90-B01 (0-1)

Lab Sample ID: 500-107509-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0054	J	0.039	0.0051	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0060	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.11		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	0.29		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.44		0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.13		0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.18		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.078	J	0.20	0.071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.40		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18		0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.021	J	0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.6		0.47	0.22	mg/Kg	1	☼	6010B	Total/NA
Barium	34		0.47	0.086	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.19	0.041	mg/Kg	1	☼	6010B	Total/NA
Boron	6.3		2.4	0.33	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.082	J	0.095	0.027	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	95	30	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.8		0.47	0.081	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.9		0.24	0.053	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.47	0.10	mg/Kg	1	☼	6010B	Total/NA
Iron	8900		9.5	3.6	mg/Kg	1	☼	6010B	Total/NA
Lead	20		0.24	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	73000	B	47	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	270		0.47	0.094	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.47	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	550		24	3.9	mg/Kg	1	☼	6010B	Total/NA
Silver	0.12	J	0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		47	6.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.24	0.069	mg/Kg	1	☼	6010B	Total/NA
Zinc	55		0.95	0.30	mg/Kg	1	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.73		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.9		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.14	J	0.50	0.020	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B01 (0-1) (Continued)

Lab Sample ID: 500-107509-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.38		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.020	0.010	mg/Kg	1	*	7471B	Total/NA
pH	8.90		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

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Client Sample ID: 3011-90-B07 (0-1)

Lab Sample ID: 500-107509-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Phenanthrene	0.11		0.036	0.0050	mg/Kg	1	*	*	8270D	Total/NA
Anthracene	0.021	J	0.036	0.0060	mg/Kg	1	*	*	8270D	Total/NA
Fluoranthene	0.28		0.036	0.0067	mg/Kg	1	*	*	8270D	Total/NA
Pyrene	0.45		0.036	0.0071	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]anthracene	0.13		0.036	0.0048	mg/Kg	1	*	*	8270D	Total/NA
Chrysene	0.17		0.036	0.0098	mg/Kg	1	*	*	8270D	Total/NA
Benzo[b]fluoranthene	0.33		0.036	0.0078	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B07 (0-1) (Continued)

Lab Sample ID: 500-107509-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[k]fluoranthene	0.13		0.036	0.011	mg/Kg	1	☼	8270D		Total/NA
Benzo[a]pyrene	0.18		0.036	0.0070	mg/Kg	1	☼	8270D		Total/NA
Indeno[1,2,3-cd]pyrene	0.10		0.036	0.0093	mg/Kg	1	☼	8270D		Total/NA
Benzo[g,h,i]perylene	0.11		0.036	0.012	mg/Kg	1	☼	8270D		Total/NA
Arsenic	2.7		0.55	0.26	mg/Kg	1	☼	6010B		Total/NA
Barium	30		0.55	0.10	mg/Kg	1	☼	6010B		Total/NA
Beryllium	0.28		0.22	0.048	mg/Kg	1	☼	6010B		Total/NA
Boron	7.4		2.8	0.39	mg/Kg	1	☼	6010B		Total/NA
Cadmium	0.065	J	0.11	0.032	mg/Kg	1	☼	6010B		Total/NA
Calcium	140000	B	110	36	mg/Kg	10	☼	6010B		Total/NA
Chromium	17		0.55	0.095	mg/Kg	1	☼	6010B		Total/NA
Cobalt	4.4		0.28	0.062	mg/Kg	1	☼	6010B		Total/NA
Copper	13		0.55	0.12	mg/Kg	1	☼	6010B		Total/NA
Iron	8800		11	4.3	mg/Kg	1	☼	6010B		Total/NA
Lead	22		0.28	0.14	mg/Kg	1	☼	6010B		Total/NA
Magnesium	100000		55	22	mg/Kg	10	☼	6010B		Total/NA
Manganese	360		0.55	0.11	mg/Kg	1	☼	6010B		Total/NA
Nickel	10		0.55	0.15	mg/Kg	1	☼	6010B		Total/NA
Potassium	570		28	4.5	mg/Kg	1	☼	6010B		Total/NA
Selenium	0.50	J	0.55	0.27	mg/Kg	1	☼	6010B		Total/NA
Silver	0.17	J	0.28	0.065	mg/Kg	1	☼	6010B		Total/NA
Sodium	1400		55	7.3	mg/Kg	1	☼	6010B		Total/NA
Vanadium	13		0.28	0.081	mg/Kg	1	☼	6010B		Total/NA
Zinc	39		1.1	0.35	mg/Kg	1	☼	6010B		Total/NA
Barium	0.59		0.50	0.050	mg/L	1		6010B		TCLP
Boron	0.65		0.50	0.050	mg/L	1		6010B		TCLP
Cobalt	0.012	J	0.025	0.010	mg/L	1		6010B		TCLP
Manganese	3.5		0.025	0.010	mg/L	1		6010B		TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B		TCLP
Zinc	0.085	J	0.50	0.020	mg/L	1		6010B		TCLP
Manganese	0.49		0.025	0.010	mg/L	1		6010B		SPLP East
Mercury	0.0095	J	0.018	0.0094	mg/Kg	1	☼	7471B		Total/NA
pH	8.51		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-23	3011-90-B06 (0-1)	Solid	02/11/16 09:55	02/12/16 07:55
500-107509-24	3011-90-B06 (0-1)D	Solid	02/11/16 09:55	02/12/16 07:55
500-107509-26	3011-90-B02 (0-1)	Solid	02/11/16 10:20	02/12/16 07:55
500-107509-27	3011-90-B01 (0-1)	Solid	02/11/16 10:30	02/12/16 07:55
500-107509-30	3011-90-B07 (0-1)	Solid	02/11/16 13:00	02/12/16 07:55



Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)

Lab Sample ID: 500-107509-23

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Bromodichloromethane	<0.0046		0.0046	0.00077	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Bromoform	<0.0046		0.0046	0.00093	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Chloroform	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00093	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Dibromochloromethane	<0.0046		0.0046	0.00052	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,1-Dichloroethane	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Methylene Chloride	<0.0046		0.0046	0.0034	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00072	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Tetrachloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00088	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1
Xylenes, Total	<0.0091		0.0091	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 03:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 122	02/12/16 09:20	02/19/16 03:17	1
Dibromofluoromethane	96		75 - 120	02/12/16 09:20	02/19/16 03:17	1
1,2-Dichloroethane-d4 (Surr)	90		70 - 134	02/12/16 09:20	02/19/16 03:17	1
Toluene-d8 (Surr)	100		75 - 122	02/12/16 09:20	02/19/16 03:17	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	☼	02/16/16 07:10	02/24/16 13:17	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)

Lab Sample ID: 500-107509-23

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.3

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	☼	02/16/16 07:10	02/24/16 13:17	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Fluorene	0.0097	J	0.038	0.0054	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Phenanthrene	0.15		0.038	0.0054	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Anthracene	0.018	J	0.038	0.0064	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Fluoranthene	0.23		0.038	0.0071	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Pyrene	0.32		0.038	0.0076	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Benzo[a]anthracene	0.094		0.038	0.0052	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)

Lab Sample ID: 500-107509-23

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.12		0.038	0.010	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Benzo[b]fluoranthene	0.20		0.038	0.0083	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Benzo[k]fluoranthene	0.076		0.038	0.011	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Benzo[a]pyrene	0.10		0.038	0.0074	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Indeno[1,2,3-cd]pyrene	0.056		0.038	0.010	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Dibenz(a,h)anthracene	0.013	J	0.038	0.0074	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
Benzo[g,h,i]perylene	0.050		0.038	0.012	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/16/16 07:10	02/24/16 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	64		25 - 110	02/16/16 07:10	02/24/16 13:17	1
Phenol-d5	63		31 - 110	02/16/16 07:10	02/24/16 13:17	1
Nitrobenzene-d5	61		25 - 115	02/16/16 07:10	02/24/16 13:17	1
2-Fluorobiphenyl	70		25 - 119	02/16/16 07:10	02/24/16 13:17	1
2,4,6-Tribromophenol	54		35 - 137	02/16/16 07:10	02/24/16 13:17	1
Terphenyl-d14	147	X	36 - 134	02/16/16 07:10	02/24/16 13:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.99		0.99	0.21	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Arsenic	5.1		0.50	0.23	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Barium	55		0.50	0.091	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Beryllium	0.43		0.20	0.043	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Boron	4.3		2.5	0.35	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Cadmium	0.096	J	0.099	0.029	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Calcium	46000	B	99	32	mg/Kg	☼	02/18/16 09:48	02/23/16 22:47	10
Chromium	13		0.50	0.085	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Cobalt	7.6		0.25	0.056	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Copper	16		0.50	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Iron	13000		9.9	3.8	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Lead	52		0.25	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Magnesium	22000		5.0	2.0	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Manganese	390		0.50	0.098	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Nickel	18		0.50	0.13	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Potassium	870		25	4.0	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Selenium	0.46	J	0.50	0.25	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Silver	0.066	J	0.25	0.058	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Sodium	1500		50	6.5	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Thallium	<0.50		0.50	0.24	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Vanadium	19		0.25	0.072	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1
Zinc	69		0.99	0.31	mg/Kg	☼	02/18/16 09:48	02/21/16 08:23	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.41	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 07:39	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 07:39	1
Boron	0.53		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 07:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)

Lab Sample ID: 500-107509-23

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 81.3

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		02/18/16 08:47	02/19/16 07:39	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:39	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:39	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 07:39	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 07:39	1
Manganese	1.1		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:39	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:39	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 07:39	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:39	1
Zinc	0.089	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 07:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.88		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 08:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 17:57	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 17:57	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 12:28	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020		0.018	0.0096	mg/Kg	☼	02/18/16 16:00	02/19/16 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.95		0.200	0.200	SU			02/13/16 11:29	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)D

Lab Sample ID: 500-107509-24

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Benzene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Bromodichloromethane	<0.0051		0.0051	0.00086	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Bromoform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Bromomethane	<0.0051		0.0051	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
2-Butanone (MEK)	<0.0051		0.0051	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Carbon disulfide	<0.0051		0.0051	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Carbon tetrachloride	<0.0051		0.0051	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Chlorobenzene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Chloroethane	<0.0051		0.0051	0.0021	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Chloroform	<0.0051		0.0051	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Chloromethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
cis-1,2-Dichloroethene	<0.0051		0.0051	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
cis-1,3-Dichloropropene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Dibromochloromethane	<0.0051		0.0051	0.00058	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,1-Dichloroethane	<0.0051		0.0051	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,2-Dichloroethane	<0.0051		0.0051	0.00075	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,1-Dichloroethene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,2-Dichloropropane	<0.0051		0.0051	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,3-Dichloropropane, Total	<0.0051		0.0051	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Ethylbenzene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Methylene Chloride	<0.0051		0.0051	0.0038	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Methyl tert-butyl ether	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Styrene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,1,2,2-Tetrachloroethane	<0.0051		0.0051	0.00081	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Tetrachloroethene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Toluene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
trans-1,2-Dichloroethene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
trans-1,3-Dichloropropene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,1,1-Trichloroethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
1,1,2-Trichloroethane	<0.0051		0.0051	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Trichloroethene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Vinyl acetate	<0.0051		0.0051	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Vinyl chloride	<0.0051		0.0051	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 03:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 122	02/12/16 09:20	02/19/16 03:42	1
Dibromofluoromethane	98		75 - 120	02/12/16 09:20	02/19/16 03:42	1
1,2-Dichloroethane-d4 (Surr)	89		70 - 134	02/12/16 09:20	02/19/16 03:42	1
Toluene-d8 (Surr)	100		75 - 122	02/12/16 09:20	02/19/16 03:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.092	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)D

Lab Sample ID: 500-107509-24

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Naphthalene	<0.041		0.041	0.0063	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2-Methylnaphthalene	<0.041		0.041	0.0076	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,4-Dinitrophenol	<0.83		0.83	0.73	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Phenanthrene	0.052		0.041	0.0057	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Anthracene	0.011 J		0.041	0.0069	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Fluoranthene	0.13		0.041	0.0076	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Pyrene	0.18		0.041	0.0082	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Butyl benzyl phthalate	<0.21		0.21	0.078	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Benzo[a]anthracene	0.061		0.041	0.0055	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)D

Lab Sample ID: 500-107509-24

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.095		0.041	0.011	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Bis(2-ethylhexyl) phthalate	0.66		0.21	0.075	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Benzo[b]fluoranthene	0.18		0.041	0.0089	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Benzo[k]fluoranthene	0.068		0.041	0.012	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Benzo[a]pyrene	0.089		0.041	0.0080	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Indeno[1,2,3-cd]pyrene	0.054		0.041	0.011	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0080	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
Benzo[g,h,i]perylene	0.062		0.041	0.013	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/16/16 07:10	02/25/16 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	84		25 - 110	02/16/16 07:10	02/25/16 18:52	1
Phenol-d5	80		31 - 110	02/16/16 07:10	02/25/16 18:52	1
Nitrobenzene-d5	75		25 - 115	02/16/16 07:10	02/25/16 18:52	1
2-Fluorobiphenyl	80		25 - 119	02/16/16 07:10	02/25/16 18:52	1
2,4,6-Tribromophenol	73		35 - 137	02/16/16 07:10	02/25/16 18:52	1
Terphenyl-d14	173	X	36 - 134	02/16/16 07:10	02/25/16 18:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.3		1.3	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Arsenic	6.8		0.63	0.29	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Barium	56		0.63	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Beryllium	0.53		0.25	0.055	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Boron	5.2		3.2	0.44	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Cadmium	0.12	J	0.13	0.036	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Calcium	37000		13	4.1	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Chromium	16		0.63	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Cobalt	8.3		0.32	0.071	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Copper	18		0.63	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Iron	15000		13	4.9	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Lead	81		0.32	0.16	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Magnesium	24000		6.3	2.6	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Manganese	430		0.63	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Nickel	20		0.63	0.17	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Potassium	990		32	5.1	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Selenium	<0.63		0.63	0.31	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Silver	<0.32		0.32	0.074	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Sodium	1700		63	8.3	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Thallium	<0.63		0.63	0.31	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Vanadium	23		0.32	0.092	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1
Zinc	72		1.3	0.40	mg/Kg	☼	02/18/16 09:48	02/21/16 08:36	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.37	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 07:46	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 07:46	1
Boron	0.55		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 07:46	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B06 (0-1)D

Lab Sample ID: 500-107509-24

Date Collected: 02/11/16 09:55

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.2

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		02/18/16 08:47	02/19/16 07:46	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:46	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:46	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 07:46	1
Lead	0.0085		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 07:46	1
Manganese	1.4		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:46	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:46	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 07:46	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 07:46	1
Zinc	0.21	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 07:46	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.19		0.0075	0.0075	mg/L		02/18/16 16:32	02/20/16 08:54	1
Manganese	0.54		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 08:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 18:01	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 18:01	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		02/17/16 16:15	02/18/16 12:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.019		0.019	0.0099	mg/Kg	☼	02/18/16 16:00	02/19/16 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.00		0.200	0.200	SU			02/13/16 11:31	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B02 (0-1)

Lab Sample ID: 500-107509-26

Date Collected: 02/11/16 10:20

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0032	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Benzene	<0.0042		0.0042	0.00093	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Bromodichloromethane	<0.0042		0.0042	0.00071	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Bromoform	<0.0042		0.0042	0.00085	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Bromomethane	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
2-Butanone (MEK)	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Carbon disulfide	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Carbon tetrachloride	<0.0042		0.0042	0.00090	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Chlorobenzene	<0.0042		0.0042	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Chloroethane	<0.0042		0.0042	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Chloroform	<0.0042		0.0042	0.00082	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Chloromethane	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
cis-1,2-Dichloroethene	<0.0042		0.0042	0.00085	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
cis-1,3-Dichloropropene	<0.0042		0.0042	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Dibromochloromethane	<0.0042		0.0042	0.00048	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,1-Dichloroethane	<0.0042		0.0042	0.00086	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,2-Dichloroethane	<0.0042		0.0042	0.00062	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,1-Dichloroethene	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,2-Dichloropropane	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,3-Dichloropropane, Total	<0.0042		0.0042	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Ethylbenzene	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
2-Hexanone	<0.0042		0.0042	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Methylene Chloride	<0.0042		0.0042	0.0032	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
4-Methyl-2-pentanone (MIBK)	<0.0042		0.0042	0.00086	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Methyl tert-butyl ether	<0.0042		0.0042	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Styrene	<0.0042		0.0042	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,1,2,2-Tetrachloroethane	<0.0042		0.0042	0.00066	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Tetrachloroethene	<0.0042		0.0042	0.00087	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Toluene	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
trans-1,2-Dichloroethene	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
trans-1,3-Dichloropropene	<0.0042		0.0042	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,1,1-Trichloroethane	<0.0042		0.0042	0.00097	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
1,1,2-Trichloroethane	<0.0042		0.0042	0.00081	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Trichloroethene	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Vinyl acetate	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Vinyl chloride	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1
Xylenes, Total	<0.0084		0.0084	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 04:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 122	02/12/16 09:20	02/19/16 04:33	1
Dibromofluoromethane	98		75 - 120	02/12/16 09:20	02/19/16 04:33	1
1,2-Dichloroethane-d4 (Surr)	91		70 - 134	02/12/16 09:20	02/19/16 04:33	1
Toluene-d8 (Surr)	103		75 - 122	02/12/16 09:20	02/19/16 04:33	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	☼	02/16/16 07:10	02/23/16 13:10	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.058	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B02 (0-1)

Lab Sample ID: 500-107509-26

Date Collected: 02/11/16 10:20

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.3

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	☼	02/16/16 07:10	02/23/16 13:10	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Hexachlorocyclopentadiene	<0.79		0.79	0.22	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2-Nitroaniline	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Acenaphthylene	<0.039		0.039	0.0051	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Hexachlorobenzene	<0.079		0.079	0.0090	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Phenanthrene	0.066		0.039	0.0054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Anthracene	0.012 J		0.039	0.0065	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Carbazole	<0.20		0.20	0.097	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Fluoranthene	0.18		0.039	0.0072	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Pyrene	0.12		0.039	0.0078	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Benzo[a]anthracene	0.056		0.039	0.0052	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B02 (0-1)

Lab Sample ID: 500-107509-26

Date Collected: 02/11/16 10:20

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.074		0.039	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.071	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Benzo[b]fluoranthene	0.12		0.039	0.0084	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Benzo[k]fluoranthene	0.039		0.039	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Benzo[a]pyrene	0.065		0.039	0.0076	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Indeno[1,2,3-cd]pyrene	0.033	J	0.039	0.010	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0075	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
Benzo[g,h,i]perylene	0.029	J	0.039	0.013	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:10	02/23/16 13:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	76		25 - 110	02/16/16 07:10	02/23/16 13:10	1
Phenol-d5	67		31 - 110	02/16/16 07:10	02/23/16 13:10	1
Nitrobenzene-d5	74		25 - 115	02/16/16 07:10	02/23/16 13:10	1
2-Fluorobiphenyl	126	X	25 - 119	02/16/16 07:10	02/23/16 13:10	1
2,4,6-Tribromophenol	82		35 - 137	02/16/16 07:10	02/23/16 13:10	1
Terphenyl-d14	98		36 - 134	02/16/16 07:10	02/23/16 13:10	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Arsenic	4.9		0.55	0.25	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Barium	47		0.55	0.10	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Beryllium	0.42		0.22	0.047	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Boron	3.7		2.7	0.38	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Cadmium	0.14		0.11	0.032	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Calcium	54000	B	110	35	mg/Kg	☼	02/18/16 09:48	02/23/16 22:56	10
Chromium	11		0.55	0.094	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Cobalt	6.3		0.27	0.062	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Copper	13		0.55	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Iron	12000		11	4.2	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Lead	58		0.27	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Magnesium	25000		5.5	2.2	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Manganese	410		0.55	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Nickel	14		0.55	0.15	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Potassium	650		27	4.5	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Selenium	0.42	J	0.55	0.27	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Silver	<0.27		0.27	0.064	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Sodium	1300		55	7.2	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Vanadium	16		0.27	0.080	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1
Zinc	60		1.1	0.35	mg/Kg	☼	02/18/16 09:48	02/21/16 08:46	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.39	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 08:00	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 08:00	1
Boron	0.58		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 08:00	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B02 (0-1)

Lab Sample ID: 500-107509-26

Date Collected: 02/11/16 10:20

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.3

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		02/18/16 08:47	02/19/16 08:00	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:00	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:00	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 08:00	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 08:00	1
Manganese	0.73		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:00	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:00	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 08:00	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:00	1
Zinc	0.26	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 08:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.75		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 09:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 18:09	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 18:09	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 12:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.019	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 14:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.84		0.200	0.200	SU			02/13/16 11:38	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B01 (0-1)

Lab Sample ID: 500-107509-27

Date Collected: 02/11/16 10:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Carbon tetrachloride	<0.0046		0.0046	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Chloroform	<0.0046		0.0046	0.00090	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,1-Dichloroethane	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Tetrachloroethene	<0.0046		0.0046	0.00096	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 04:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 122	02/12/16 09:20	02/19/16 04:58	1
Dibromofluoromethane	96		75 - 120	02/12/16 09:20	02/19/16 04:58	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134	02/12/16 09:20	02/19/16 04:58	1
Toluene-d8 (Surr)	101		75 - 122	02/12/16 09:20	02/19/16 04:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.086	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.058	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B01 (0-1)

Lab Sample ID: 500-107509-27

Date Collected: 02/11/16 10:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.3

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	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2-Methylphenol	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.048	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2-Chlorophenol	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,4-Dichlorophenol	<0.39		0.39	0.092	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2-Nitroaniline	<0.20		0.20	0.052	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,6-Dinitrotoluene	<0.20		0.20	0.076	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,4-Dinitrophenol	<0.78		0.78	0.69	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Acenaphthylene	0.0054	J	0.039	0.0051	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Fluorene	0.0060	J	0.039	0.0055	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.045	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Phenanthrene	0.11		0.039	0.0054	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Anthracene	0.022	J	0.039	0.0065	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Carbazole	<0.20		0.20	0.097	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Fluoranthene	0.29		0.039	0.0072	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Pyrene	0.44		0.039	0.0077	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Benzo[a]anthracene	0.13		0.039	0.0052	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B01 (0-1)

Lab Sample ID: 500-107509-27

Date Collected: 02/11/16 10:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.18		0.039	0.011	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.054	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Bis(2-ethylhexyl) phthalate	0.078	J	0.20	0.071	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Di-n-octyl phthalate	<0.20		0.20	0.063	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Benzo[b]fluoranthene	0.40		0.039	0.0084	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Benzo[k]fluoranthene	0.12		0.039	0.011	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Benzo[a]pyrene	0.18		0.039	0.0075	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Indeno[1,2,3-cd]pyrene	0.13		0.039	0.010	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Dibenz(a,h)anthracene	0.021	J	0.039	0.0075	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
Benzo[g,h,i]perylene	0.12		0.039	0.013	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/16/16 07:10	02/25/16 01:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	74		25 - 110	02/16/16 07:10	02/25/16 01:23	1
Phenol-d5	72		31 - 110	02/16/16 07:10	02/25/16 01:23	1
Nitrobenzene-d5	62		25 - 115	02/16/16 07:10	02/25/16 01:23	1
2-Fluorobiphenyl	72		25 - 119	02/16/16 07:10	02/25/16 01:23	1
2,4,6-Tribromophenol	70		35 - 137	02/16/16 07:10	02/25/16 01:23	1
Terphenyl-d14	153	X	36 - 134	02/16/16 07:10	02/25/16 01:23	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.95		0.95	0.20	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Arsenic	3.6		0.47	0.22	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Barium	34		0.47	0.086	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Beryllium	0.29		0.19	0.041	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Boron	6.3		2.4	0.33	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Cadmium	0.082	J	0.095	0.027	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Calcium	120000	B	95	30	mg/Kg	☼	02/18/16 09:48	02/23/16 23:00	10
Chromium	8.8		0.47	0.081	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Cobalt	3.9		0.24	0.053	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Copper	14		0.47	0.10	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Iron	8900		9.5	3.6	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Lead	20		0.24	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Magnesium	73000	B	47	19	mg/Kg	☼	02/18/16 09:48	02/23/16 01:14	10
Manganese	270		0.47	0.094	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Nickel	10		0.47	0.13	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Potassium	550		24	3.9	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Selenium	<0.47		0.47	0.23	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Silver	0.12	J	0.24	0.055	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Sodium	1100		47	6.2	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Thallium	<0.47		0.47	0.23	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Vanadium	12		0.24	0.069	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1
Zinc	55		0.95	0.30	mg/Kg	☼	02/18/16 09:48	02/21/16 08:51	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.38	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 08:07	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 08:07	1
Boron	0.73		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 08:07	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B01 (0-1)

Lab Sample ID: 500-107509-27

Date Collected: 02/11/16 10:30

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 85.3

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		02/18/16 08:47	02/19/16 08:07	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:07	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:07	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 08:07	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 08:07	1
Manganese	1.9		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:07	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:07	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 08:07	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:07	1
Zinc	0.14	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 08:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.38		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 09:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 18:13	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 18:13	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 12:39	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.012	J	0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.90		0.200	0.200	SU			02/13/16 11:40	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B07 (0-1)

Lab Sample ID: 500-107509-30

Date Collected: 02/11/16 13:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Benzene	<0.0047		0.0047	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Bromodichloromethane	<0.0047		0.0047	0.00079	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Bromoform	<0.0047		0.0047	0.00096	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Bromomethane	<0.0047		0.0047	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
2-Butanone (MEK)	<0.0047		0.0047	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Carbon disulfide	<0.0047		0.0047	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Carbon tetrachloride	<0.0047		0.0047	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Chlorobenzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Chloroethane	<0.0047		0.0047	0.0020	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Chloroform	<0.0047		0.0047	0.00092	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Chloromethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
cis-1,2-Dichloroethene	<0.0047		0.0047	0.00096	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
cis-1,3-Dichloropropene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Dibromochloromethane	<0.0047		0.0047	0.00054	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,1-Dichloroethane	<0.0047		0.0047	0.00097	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,2-Dichloroethane	<0.0047		0.0047	0.00070	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,1-Dichloroethene	<0.0047		0.0047	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,2-Dichloropropane	<0.0047		0.0047	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,3-Dichloropropane, Total	<0.0047		0.0047	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Ethylbenzene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Methylene Chloride	<0.0047		0.0047	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.00097	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Methyl tert-butyl ether	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Styrene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,1,1,2-Tetrachloroethane	<0.0047		0.0047	0.00075	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Tetrachloroethene	<0.0047		0.0047	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Toluene	<0.0047		0.0047	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
trans-1,2-Dichloroethene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
trans-1,3-Dichloropropene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,1,1-Trichloroethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
1,1,2-Trichloroethane	<0.0047		0.0047	0.00091	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Trichloroethene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Vinyl acetate	<0.0047		0.0047	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Vinyl chloride	<0.0047		0.0047	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1
Xylenes, Total	<0.0094		0.0094	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 06:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 122	02/12/16 09:20	02/19/16 06:14	1
Dibromofluoromethane	94		75 - 120	02/12/16 09:20	02/19/16 06:14	1
1,2-Dichloroethane-d4 (Surr)	83		70 - 134	02/12/16 09:20	02/19/16 06:14	1
Toluene-d8 (Surr)	103		75 - 122	02/12/16 09:20	02/19/16 06:14	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	☼	02/16/16 07:10	02/25/16 02:21	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B07 (0-1)

Lab Sample ID: 500-107509-30

Date Collected: 02/11/16 13:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 88.6

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	☼	02/16/16 07:10	02/25/16 02:21	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Pentachlorophenol	<0.72		0.72	0.58	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Phenanthrene	0.11		0.036	0.0050	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Anthracene	0.021 J		0.036	0.0060	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Fluoranthene	0.28		0.036	0.0067	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Pyrene	0.45		0.036	0.0071	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Benzo[a]anthracene	0.13		0.036	0.0048	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B07 (0-1)

Lab Sample ID: 500-107509-30

Date Collected: 02/11/16 13:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.17		0.036	0.0098	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Benzo[b]fluoranthene	0.33		0.036	0.0078	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Benzo[k]fluoranthene	0.13		0.036	0.011	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Benzo[a]pyrene	0.18		0.036	0.0070	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Indeno[1,2,3-cd]pyrene	0.10		0.036	0.0093	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
Benzo[g,h,i]perylene	0.11		0.036	0.012	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/16/16 07:10	02/25/16 02:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	80		25 - 110	02/16/16 07:10	02/25/16 02:21	1
Phenol-d5	80		31 - 110	02/16/16 07:10	02/25/16 02:21	1
Nitrobenzene-d5	68		25 - 115	02/16/16 07:10	02/25/16 02:21	1
2-Fluorobiphenyl	76		25 - 119	02/16/16 07:10	02/25/16 02:21	1
2,4,6-Tribromophenol	70		35 - 137	02/16/16 07:10	02/25/16 02:21	1
Terphenyl-d14	168	X	36 - 134	02/16/16 07:10	02/25/16 02:21	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Arsenic	2.7		0.55	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Barium	30		0.55	0.10	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Beryllium	0.28		0.22	0.048	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Boron	7.4		2.8	0.39	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Cadmium	0.065	J	0.11	0.032	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Calcium	140000	B	110	36	mg/Kg	☼	02/18/16 09:48	02/23/16 23:12	10
Chromium	17		0.55	0.095	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Cobalt	4.4		0.28	0.062	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Copper	13		0.55	0.12	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Iron	8800		11	4.3	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Lead	22		0.28	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Magnesium	100000		55	22	mg/Kg	☼	02/18/16 09:48	02/23/16 01:27	10
Manganese	360		0.55	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Nickel	10		0.55	0.15	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Potassium	570		28	4.5	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Selenium	0.50	J	0.55	0.27	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Silver	0.17	J	0.28	0.065	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Sodium	1400		55	7.3	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Vanadium	13		0.28	0.081	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1
Zinc	39		1.1	0.35	mg/Kg	☼	02/18/16 09:48	02/21/16 09:06	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.59		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 08:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 08:43	1
Boron	0.65		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 08:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Client Sample ID: 3011-90-B07 (0-1)

Lab Sample ID: 500-107509-30

Date Collected: 02/11/16 13:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 88.6

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		02/18/16 08:47	02/19/16 08:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:43	1
Cobalt	0.012	J	0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:43	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 08:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 08:43	1
Manganese	3.5		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:43	1
Nickel	0.015	J	0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 08:43	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 08:43	1
Zinc	0.085	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 08:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.49		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 09:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 18:34	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 18:34	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		02/17/16 16:15	02/18/16 12:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0095	J	0.018	0.0094	mg/Kg	☼	02/18/16 16:00	02/19/16 12:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.51		0.200	0.200	SU			02/13/16 11:47	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-8

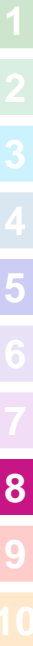
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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: _____
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 Address: _____
 Phone: _____
 Fax: _____
 E-Mail: _____

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

Chain of Custody Record

Lab Job #: 500-107509

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		7009341-0008-01									
Project Name		Lab Project #		# of Containers		Matrix					
JL38		500118104									
Project Location/State		Lab P/N									
Fane County, IL		D. Wang St									
Sampler											
S. Coop											
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix					
22		3011-90-B08(0-1)	2-11-16	0950	2	S	X	X	X	X	X
23		3011-90-B06(0-1)	2-11-16	0955	2	S	X	X	X	X	X
24		3011-90-B06(0-1)	2-11-16	0955	2	S	X	X	X	X	X
25		3011-90-B03(0-1)	2-11-16	1015	2	S	X	X	X	X	X
26		3011-90-B02(0-1)	2-11-16	1020	2	S	X	X	X	X	X
27		3011-90-B01(0-1)	2-11-16	1030	2	S	X	X	X	X	X
28		3011-90-B04(0-1)	2-11-16	1200	2	S	X	X	X	X	X
29		3011-90-B05(0-1)	2-11-16	1210	2	S	X	X	X	X	X
30		3011-90-B07(0-1)	2-11-16	1300	2	S	X	X	X	X	X
31		3011-90-B09(0-1)	2-11-16	1315	2	S	X	X	X	X	X

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

Turnaround Time Required (Business Days)

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

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	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	EE	2-11-16	1600	<i>[Signature]</i>	TA	2/11/16	1600
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	TA	2/11/16	1735	<i>[Signature]</i>	TA-CHE	2/12/16	0755
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments:

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

Report To (optional)
Contact: _____
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Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-107509

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		# of Containers	Matrix	VOC	SWC	Total TAC Metals	TCU/SRI TAC Metals		PH/90/10/11
Project Location/State		Lab PM									
Sampler		Lab PM									
Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix					Comments
32		3011-90-B10(c1)	2/11/16	1320	2 S		X	X	X	X	
33		3011-90-B11(c1)	2/11/16	1330	2 S		X	X	X	X	

Turnaround Time Required (Business Days)

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

Sample Disposal

Return to Client

Disposal by Lab

Archive for _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Lab Courier	
<i>[Signature]</i>	EA	2/11/16	1600	<i>[Signature]</i>	EA	2/11/16	1600		TR
Relinquished By	Company	Date	Time	Received By	Company	Date	Time		Shipped
<i>[Signature]</i>	EA	2/11/16	1735	<i>[Signature]</i>	EA-CHE	2/12/16	0755		
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered	

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-8

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107509-9
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:53:06 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for
Richard Wright, Senior Project Manager
(708)534-5200
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Job ID: 500-107509-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-9

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323423: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated sample 3011-91-B01 (0-1) (500-107509-34) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated sample 3011-91-B01 (0-1) (500-107509-34) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.078		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.17		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.13		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.057		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.078		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.045		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.062		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.031	J	0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.028	J	0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.7		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	53		0.53	0.097	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.41		0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	4.5		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.26		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	67000	B	110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	14		0.53	0.091	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.5		0.26	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	12000		11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	160		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	29000		5.3	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	420		0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	690		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.45	J	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000		53	7.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA
Zinc	97		1.1	0.34	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.71		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.46		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.23	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.49		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.029		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.89		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-34	3011-91-B01 (0-1)	Solid	02/11/16 10:05	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Bromodichloromethane	<0.0046		0.0046	0.00077	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Bromoform	<0.0046		0.0046	0.00093	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Bromomethane	<0.0046	*	0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chloroform	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00093	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1-Dichloroethane	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00072	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Tetrachloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00088	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Xylenes, Total	<0.0091		0.0091	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 122	02/12/16 09:20	02/18/16 22:27	1
Dibromofluoromethane	108		75 - 120	02/12/16 09:20	02/18/16 22:27	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 134	02/12/16 09:20	02/18/16 22:27	1
Toluene-d8 (Surr)	109		75 - 122	02/12/16 09:20	02/18/16 22:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Naphthalene	<0.041		0.041	0.0063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Methylnaphthalene	<0.041		0.041	0.0076	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Phenanthrene	0.078		0.041	0.0057	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Anthracene	0.013 J		0.041	0.0069	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Fluoranthene	0.17		0.041	0.0076	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Pyrene	0.13		0.041	0.0082	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Butyl benzyl phthalate	<0.21		0.21	0.078	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[a]anthracene	0.057		0.041	0.0055	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.078		0.041	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.075	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[b]fluoranthene	0.12		0.041	0.0089	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[k]fluoranthene	0.045		0.041	0.012	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[a]pyrene	0.062		0.041	0.0080	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Indeno[1,2,3-cd]pyrene	0.031	J	0.041	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0080	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[g,h,i]perylene	0.028	J	0.041	0.013	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	57		25 - 110	02/16/16 07:10	02/23/16 13:39	1
Phenol-d5	61		31 - 110	02/16/16 07:10	02/23/16 13:39	1
Nitrobenzene-d5	65		25 - 115	02/16/16 07:10	02/23/16 13:39	1
2-Fluorobiphenyl	108		25 - 119	02/16/16 07:10	02/23/16 13:39	1
2,4,6-Tribromophenol	70		35 - 137	02/16/16 07:10	02/23/16 13:39	1
Terphenyl-d14	97		36 - 134	02/16/16 07:10	02/23/16 13:39	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	☼	02/18/16 09:48	02/21/16 09:34	1
Arsenic	4.7		0.53	0.24	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Barium	53		0.53	0.097	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Beryllium	0.41		0.21	0.046	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Boron	4.5		2.6	0.37	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Cadmium	0.26		0.11	0.031	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Calcium	67000	B	110	34	mg/Kg	☼	02/18/16 09:48	02/23/16 01:52	10
Chromium	14		0.53	0.091	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Cobalt	6.5		0.26	0.060	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Copper	18		0.53	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Iron	12000		11	4.1	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Lead	160		0.26	0.13	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Magnesium	29000		5.3	2.2	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Manganese	420		0.53	0.10	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Nickel	15		0.53	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Potassium	690		26	4.3	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Selenium	0.45	J	0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Sodium	1000		53	7.0	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Vanadium	17		0.26	0.077	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Zinc	97		1.1	0.34	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.44	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 09:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 09:10	1
Boron	0.71		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 09:10	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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		02/18/16 08:47	02/19/16 09:10	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 09:10	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 09:10	1
Manganese	0.46		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 09:10	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Zinc	0.23	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 09:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.49		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 10:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 18:50	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 18:50	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 12:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.029		0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.89		0.200	0.200	SU			02/13/16 11:57	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

Metals

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

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

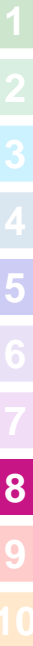
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments			
EE		1009341.0008-01											
Project Name		Lab Project #											
FL 38		SC011864											
Project Location/State		Lab PM											
Kane County, IL		D. Wright											
Sampler													
S. Cooper													
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Voc	SVOC	Total THM	Pesticides	THM	pH/Alkalinity	Preservative Key
			Date	Time									
34		3011-01-B01(0-1)	2/11/16	1005	2	S	X	X	X	X	X	X	

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

Turnaround Time Required (Business Days)
 ___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days 10 Days ___ 15 Days ___ Other
 Requested Due Date _____

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

Relinquished By <u>G</u>	Company EE	Date 2-11-16	Time 11:00	Received By P. Neal	Company TA	Date 2/11/16	Time 1000
Relinquished By P. Neal	Company TA	Date 2/11/16	Time 1735	Received By Sherrill	Company TA-CRT	Date 2/2/16	Time 0955

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-9

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
39W 958 IL 38 ISGS #3011-91 (Farmstead)

City: Elburn State: IL Zip Code: 60175

County: Kane Township: Campton

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

Latitude: 41.90544216 Longitude: -88.39442101
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90544216 Longitude: -88.39442101

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 3011-91-B01 was sampled within the construction zone adjacent to ISGS #3011-91 (Farmstead). Refer to PSI Report for ISGS #3011-91 (Farmstead) including Table 4-4, and Figures 4-13A&B.

- 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 J107509-9.

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

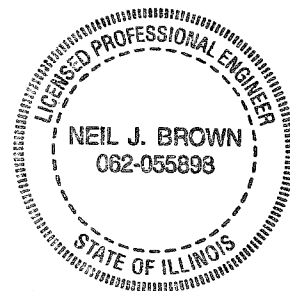
Neil J. Brown

Printed Name:

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

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-91 (Farmstead)	Comparison Criteria			
		MACs			TACO
BORING	3011-91-B01				
SAMPLE	3011-91-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.89	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	0.013 J	12,000	--	--	--
Benzo[a]anthracene	0.057	0.9	1.8	1.1	--
Benzo[a]pyrene	0.062	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.12	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.028 J	--	--	--	--
Benzo[k]fluoranthene	0.045	9	--	--	--
Chrysene	0.078	88	--	--	--
Fluoranthene	0.17	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.031 J	0.9	1.6	0.9	--
Phenanthrene	0.078	--	--	--	--
Pyrene	0.13	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	4.7	11.3	13	--	--
Barium	53	1,500	--	--	--
Beryllium	0.41	22	--	--	--
Boron	4.5	40	--	--	--
Cadmium	0.26	5.2	--	--	--
Calcium	67,000	--	--	--	--
Chromium	14	21	--	--	--
Cobalt	6.5	20	--	--	--
Copper	18	2,900	--	--	--
Iron	12,000	15,000	15,900	--	--
Lead	160 †	107	--	--	--
Magnesium	29,000	325,000	--	--	--
Manganese	420	630	636	--	--
Mercury	0.029	0.89	--	--	--
Nickel	15	100	--	--	--
Potassium	690	--	--	--	--
Sodium	1,000	--	--	--	--
Vanadium	17	550	--	--	--
Zinc	97	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.44 J	--	--	--	2
Boron	0.71	--	--	--	2
Manganese	0.46 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.49 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: 500-107509-9
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:53:06 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Job ID: 500-107509-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-9

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323423: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated sample 3011-91-B01 (0-1) (500-107509-34) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated sample 3011-91-B01 (0-1) (500-107509-34) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.078		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.17		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.13		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.057		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.078		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.045		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.062		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.031	J	0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.028	J	0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.7		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	53		0.53	0.097	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.41		0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	4.5		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.26		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	67000	B	110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	14		0.53	0.091	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.5		0.26	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	12000		11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	160		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	29000		5.3	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	420		0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	690		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.45	J	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000		53	7.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA
Zinc	97		1.1	0.34	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.71		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.46		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.23	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.49		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.029		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.89		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-34	3011-91-B01 (0-1)	Solid	02/11/16 10:05	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Bromodichloromethane	<0.0046		0.0046	0.00077	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Bromoform	<0.0046		0.0046	0.00093	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Bromomethane	<0.0046	*	0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chloroform	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00093	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1-Dichloroethane	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00072	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Tetrachloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00088	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1
Xylenes, Total	<0.0091		0.0091	0.0017	mg/Kg	☼	02/12/16 09:20	02/18/16 22:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 122	02/12/16 09:20	02/18/16 22:27	1
Dibromofluoromethane	108		75 - 120	02/12/16 09:20	02/18/16 22:27	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 134	02/12/16 09:20	02/18/16 22:27	1
Toluene-d8 (Surr)	109		75 - 122	02/12/16 09:20	02/18/16 22:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Naphthalene	<0.041		0.041	0.0063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Methylnaphthalene	<0.041		0.041	0.0076	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Phenanthrene	0.078		0.041	0.0057	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Anthracene	0.013 J		0.041	0.0069	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Fluoranthene	0.17		0.041	0.0076	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Pyrene	0.13		0.041	0.0082	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Butyl benzyl phthalate	<0.21		0.21	0.078	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[a]anthracene	0.057		0.041	0.0055	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.078		0.041	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.075	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[b]fluoranthene	0.12		0.041	0.0089	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[k]fluoranthene	0.045		0.041	0.012	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[a]pyrene	0.062		0.041	0.0080	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Indeno[1,2,3-cd]pyrene	0.031	J	0.041	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0080	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
Benzo[g,h,i]perylene	0.028	J	0.041	0.013	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/16/16 07:10	02/23/16 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	57		25 - 110	02/16/16 07:10	02/23/16 13:39	1
Phenol-d5	61		31 - 110	02/16/16 07:10	02/23/16 13:39	1
Nitrobenzene-d5	65		25 - 115	02/16/16 07:10	02/23/16 13:39	1
2-Fluorobiphenyl	108		25 - 119	02/16/16 07:10	02/23/16 13:39	1
2,4,6-Tribromophenol	70		35 - 137	02/16/16 07:10	02/23/16 13:39	1
Terphenyl-d14	97		36 - 134	02/16/16 07:10	02/23/16 13:39	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	☼	02/18/16 09:48	02/21/16 09:34	1
Arsenic	4.7		0.53	0.24	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Barium	53		0.53	0.097	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Beryllium	0.41		0.21	0.046	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Boron	4.5		2.6	0.37	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Cadmium	0.26		0.11	0.031	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Calcium	67000	B	110	34	mg/Kg	☼	02/18/16 09:48	02/23/16 01:52	10
Chromium	14		0.53	0.091	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Cobalt	6.5		0.26	0.060	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Copper	18		0.53	0.11	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Iron	12000		11	4.1	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Lead	160		0.26	0.13	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Magnesium	29000		5.3	2.2	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Manganese	420		0.53	0.10	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Nickel	15		0.53	0.14	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Potassium	690		26	4.3	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Selenium	0.45	J	0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Sodium	1000		53	7.0	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Vanadium	17		0.26	0.077	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1
Zinc	97		1.1	0.34	mg/Kg	☼	02/18/16 09:48	02/21/16 09:34	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.44	J	0.50	0.050	mg/L		02/18/16 08:47	02/19/16 09:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/18/16 08:47	02/19/16 09:10	1
Boron	0.71		0.50	0.050	mg/L		02/18/16 08:47	02/19/16 09:10	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Client Sample ID: 3011-91-B01 (0-1)

Lab Sample ID: 500-107509-34

Date Collected: 02/11/16 10:05

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 77.5

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		02/18/16 08:47	02/19/16 09:10	1
Chromium	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Cobalt	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Iron	<0.40		0.40	0.20	mg/L		02/18/16 08:47	02/19/16 09:10	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/18/16 08:47	02/19/16 09:10	1
Manganese	0.46		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Nickel	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Selenium	<0.050		0.050	0.020	mg/L		02/18/16 08:47	02/19/16 09:10	1
Silver	<0.025		0.025	0.010	mg/L		02/18/16 08:47	02/19/16 09:10	1
Zinc	0.23	J	0.50	0.020	mg/L		02/18/16 08:47	02/19/16 09:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.49		0.025	0.010	mg/L		02/18/16 16:32	02/20/16 10:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/18/16 08:47	02/18/16 18:50	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/18/16 08:47	02/18/16 18:50	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 12:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.029		0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 12:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.89		0.200	0.200	SU			02/13/16 11:57	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

Metals

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

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-9

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments			
EE		1009341.0008-01											
Project Name		Lab Project #											
FL 38		SC011864											
Project Location/State		Lab PM											
Kane County, IL		D. Wright											
Sampler													
S. Cooper													
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Voc	SVOC	Total THM	Pesticides	THM	pH/Alkalinity	Preservative Key
			Date	Time									
34		3011-01-B01(0-1)	2/11/16	1005	2	S	X	X	X	X	X	X	

- Preservative Key
- HCL, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - NaHSO4
 - Cool to 4°
 - None
 - Other

Turnaround Time Required (Business Days)
 ___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days 10 Days ___ 15 Days ___ Other
 Requested Due Date _____

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

Relinquished By <u>G</u>	Company EE	Date 2-11-16	Time 11:00	Received By P. Neal	Company TA	Date 2/11/16	Time 1000
Relinquished By P. Neal	Company TA	Date 2/11/16	Time 1735	Received By Sherrill Smith	Company TA-CRT	Date 2/2/16	Time 0955

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments: _____

Lab Comments: _____

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-9

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
39W 280 block of IL 38 ISGS #3011-92 (Vacant Land)

City: St. Charles State: IL Zip Code: 60175

County: Kane Township: St. Charles

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

Latitude: 41.904686 Longitude: -88.383685
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.904686 Longitude: -88.383685

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 3011-92-B01 was sampled within the construction zone adjacent to ISGS #3011-92 (Vacant Land). Refer to PSI Report for ISGS #3011-92 (Vacant Land) including Table 4-4, and Figures 4-13A&B and 4-14A&B.

- 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 J107509-10.

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.

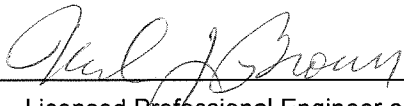
Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown

Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A
CONTAMINANTS OF CONCERN

SITE	ISGS #3011-92 (Vacant Land)	Comparison Criteria			
BORING	3011-92-B01	MACs			TACO
SAMPLE	3011-92-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.71				
VOCs (None Detected)					
SVOCs (mg/kg)					
Benzo[a]anthracene	0.045	0.9	1.8	1.1	--
Benzo[a]pyrene	0.055	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.1	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.025 J	--	--	--	--
Benzo[k]fluoranthene	0.039	9	--	--	--
Chrysene	0.061	88	--	--	--
Fluoranthene	0.13	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.027 J	0.9	1.6	0.9	--
Phenanthrene	0.036 J	--	--	--	--
Pyrene	0.12	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	5.1	11.3	13	--	--
Barium	61	1,500	--	--	--
Beryllium	0.44	22	--	--	--
Boron	4.3	40	--	--	--
Cadmium	0.069 J	5.2	--	--	--
Calcium	63,000	--	--	--	--
Chromium	11	21	--	--	--
Cobalt	8.1	20	--	--	--
Copper	13	2,900	--	--	--
Iron	12,000	15,000	15,900	--	--
Lead	46	107	--	--	--
Magnesium	25,000	325,000	--	--	--
Manganese	390	630	636	--	--
Mercury	0.025	0.89	--	--	--
Nickel	16	100	--	--	--
Potassium	820	--	--	--	--
Selenium	0.77	1.3	--	--	--
Sodium	830	--	--	--	--
Thallium	0.32 J	2.6	--	--	--
Vanadium	19	550	--	--	--
Zinc	54	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.53	--	--	--	2
Boron	0.49 J	--	--	--	2
Manganese	1.1 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	1.7 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: 500-107509-10
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:54:05 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
TotalAccess

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Job ID: 500-107509-10

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-10

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323423: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323512: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

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

GC/MS Semi VOA

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Chromium above the reporting limit (RL). Associated sample 3011-92-B05 (0-1) (500-107509-35) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-323368 and analytical batch 500-323906 contained Iron and Magnesium above the reporting limit (RL). Associated sample 3011-92-B05 (0-1) (500-107509-35) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10



Client Sample ID: 3011-92-B01 (0-1)

Lab Sample ID: 500-107509-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Phenanthrene	0.036	J	0.038	0.0054	mg/Kg	1	☼		8270D	Total/NA
Fluoranthene	0.13		0.038	0.0072	mg/Kg	1	☼		8270D	Total/NA
Pyrene	0.12		0.038	0.0077	mg/Kg	1	☼		8270D	Total/NA
Benzo[a]anthracene	0.045		0.038	0.0052	mg/Kg	1	☼		8270D	Total/NA
Chrysene	0.061		0.038	0.011	mg/Kg	1	☼		8270D	Total/NA
Benzo[b]fluoranthene	0.10		0.038	0.0083	mg/Kg	1	☼		8270D	Total/NA
Benzo[k]fluoranthene	0.039		0.038	0.011	mg/Kg	1	☼		8270D	Total/NA
Benzo[a]pyrene	0.055		0.038	0.0075	mg/Kg	1	☼		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.027	J	0.038	0.010	mg/Kg	1	☼		8270D	Total/NA
Benzo[g,h,i]perylene	0.025	J	0.038	0.012	mg/Kg	1	☼		8270D	Total/NA
Arsenic	5.1		0.58	0.27	mg/Kg	1	☼		6010B	Total/NA
Barium	61		0.58	0.11	mg/Kg	1	☼		6010B	Total/NA
Beryllium	0.44		0.23	0.051	mg/Kg	1	☼		6010B	Total/NA
Boron	4.3		2.9	0.41	mg/Kg	1	☼		6010B	Total/NA
Cadmium	0.069	J	0.12	0.034	mg/Kg	1	☼		6010B	Total/NA
Calcium	63000		120	38	mg/Kg	10	☼		6010B	Total/NA
Chromium	11	B	0.58	0.10	mg/Kg	1	☼		6010B	Total/NA
Cobalt	8.1		0.29	0.066	mg/Kg	1	☼		6010B	Total/NA
Copper	13		0.58	0.13	mg/Kg	1	☼		6010B	Total/NA
Iron	12000	B	12	4.5	mg/Kg	1	☼		6010B	Total/NA
Lead	46		0.29	0.15	mg/Kg	1	☼		6010B	Total/NA
Magnesium	25000		5.8	2.4	mg/Kg	1	☼		6010B	Total/NA
Manganese	390		0.58	0.12	mg/Kg	1	☼		6010B	Total/NA
Nickel	16		0.58	0.16	mg/Kg	1	☼		6010B	Total/NA
Potassium	820		29	4.8	mg/Kg	1	☼		6010B	Total/NA
Selenium	0.77		0.58	0.29	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Client Sample ID: 3011-92-B01 (0-1) (Continued)

Lab Sample ID: 500-107509-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	830		58	7.7	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.32	J	0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Vanadium	19		0.29	0.085	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.53		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.49	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.18	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.7		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.025		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.71		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-39	3011-92-B01 (0-1)	Solid	02/11/16 09:40	02/12/16 07:55

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Client Sample ID: 3011-92-B01 (0-1)

Lab Sample ID: 500-107509-39

Date Collected: 02/11/16 09:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0033	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Benzene	<0.0042		0.0042	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Bromodichloromethane	<0.0042		0.0042	0.00072	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Bromoform	<0.0042		0.0042	0.00087	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Bromomethane	<0.0042	*	0.0042	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
2-Butanone (MEK)	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Carbon disulfide	<0.0042		0.0042	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Carbon tetrachloride	<0.0042		0.0042	0.00091	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Chlorobenzene	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Chloroethane	<0.0042		0.0042	0.0018	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Chloroform	<0.0042		0.0042	0.00083	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Chloromethane	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
cis-1,2-Dichloroethene	<0.0042		0.0042	0.00087	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
cis-1,3-Dichloropropene	<0.0042		0.0042	0.00097	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Dibromochloromethane	<0.0042		0.0042	0.00049	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,1-Dichloroethane	<0.0042		0.0042	0.00087	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,2-Dichloroethane	<0.0042		0.0042	0.00063	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,1-Dichloroethene	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,2-Dichloropropane	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,3-Dichloropropane, Total	<0.0042		0.0042	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Ethylbenzene	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
2-Hexanone	<0.0042		0.0042	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Methylene Chloride	<0.0042		0.0042	0.0032	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
4-Methyl-2-pentanone (MIBK)	<0.0042		0.0042	0.00087	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Methyl tert-butyl ether	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Styrene	<0.0042		0.0042	0.00099	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,1,2,2-Tetrachloroethane	<0.0042		0.0042	0.00067	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Tetrachloroethene	<0.0042		0.0042	0.00088	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Toluene	<0.0042		0.0042	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
trans-1,2-Dichloroethene	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
trans-1,3-Dichloropropene	<0.0042		0.0042	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,1,1-Trichloroethane	<0.0042		0.0042	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
1,1,2-Trichloroethane	<0.0042		0.0042	0.00082	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Trichloroethene	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Vinyl acetate	<0.0042		0.0042	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Vinyl chloride	<0.0042		0.0042	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1
Xylenes, Total	<0.0085		0.0085	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 12:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 122	02/12/16 09:20	02/19/16 12:03	1
Dibromofluoromethane	104		75 - 120	02/12/16 09:20	02/19/16 12:03	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/12/16 09:20	02/19/16 12:03	1
Toluene-d8 (Surr)	111		75 - 122	02/12/16 09:20	02/19/16 12:03	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	☼	02/16/16 07:10	02/23/16 15:08	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
1,3-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
1,4-Dichlorobenzene	<0.19		0.19	0.050	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Client Sample ID: 3011-92-B01 (0-1)

Lab Sample ID: 500-107509-39

Date Collected: 02/11/16 09:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.0

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	☼	02/16/16 07:10	02/23/16 15:08	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
N-Nitrosodiphenylamine	<0.19		0.19	0.046	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Phenanthrene	0.036	J	0.038	0.0054	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Anthracene	<0.038		0.038	0.0065	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Carbazole	<0.19		0.19	0.097	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Fluoranthene	0.13		0.038	0.0072	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Pyrene	0.12		0.038	0.0077	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Butyl benzyl phthalate	<0.19		0.19	0.074	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Benzo[a]anthracene	0.045		0.038	0.0052	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Client Sample ID: 3011-92-B01 (0-1)

Lab Sample ID: 500-107509-39

Date Collected: 02/11/16 09:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.061		0.038	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Benzo[b]fluoranthene	0.10		0.038	0.0083	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Benzo[k]fluoranthene	0.039		0.038	0.011	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Benzo[a]pyrene	0.055		0.038	0.0075	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Indeno[1,2,3-cd]pyrene	0.027	J	0.038	0.010	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0075	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
Benzo[g,h,i]perylene	0.025	J	0.038	0.012	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/16/16 07:10	02/23/16 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	68		25 - 110	02/16/16 07:10	02/23/16 15:08	1
Phenol-d5	62		31 - 110	02/16/16 07:10	02/23/16 15:08	1
Nitrobenzene-d5	64		25 - 115	02/16/16 07:10	02/23/16 15:08	1
2-Fluorobiphenyl	70		25 - 119	02/16/16 07:10	02/23/16 15:08	1
2,4,6-Tribromophenol	50		35 - 137	02/16/16 07:10	02/23/16 15:08	1
Terphenyl-d14	126		36 - 134	02/16/16 07:10	02/23/16 15:08	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Arsenic	5.1		0.58	0.27	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Barium	61		0.58	0.11	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Beryllium	0.44		0.23	0.051	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Boron	4.3		2.9	0.41	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Cadmium	0.069	J	0.12	0.034	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Calcium	63000		120	38	mg/Kg	☼	02/18/16 10:17	02/23/16 02:38	10
Chromium	11	B	0.58	0.10	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Cobalt	8.1		0.29	0.066	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Copper	13		0.58	0.13	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Iron	12000	B	12	4.5	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Lead	46		0.29	0.15	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Magnesium	25000		5.8	2.4	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Manganese	390		0.58	0.12	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Nickel	16		0.58	0.16	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Potassium	820		29	4.8	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Selenium	0.77		0.58	0.29	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Silver	<0.29		0.29	0.068	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Sodium	830		58	7.7	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Thallium	0.32	J	0.58	0.29	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Vanadium	19		0.29	0.085	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1
Zinc	54		1.2	0.37	mg/Kg	☼	02/18/16 10:17	02/21/16 00:29	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.53		0.50	0.050	mg/L		02/17/16 14:51	02/18/16 21:01	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/17/16 14:51	02/18/16 21:01	1
Boron	0.49	J	0.50	0.050	mg/L		02/17/16 14:51	02/18/16 21:01	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Client Sample ID: 3011-92-B01 (0-1)

Lab Sample ID: 500-107509-39

Date Collected: 02/11/16 09:40

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.0

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		02/17/16 14:51	02/18/16 21:01	1
Chromium	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:01	1
Cobalt	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:01	1
Iron	<0.40		0.40	0.20	mg/L		02/17/16 14:51	02/18/16 21:01	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/17/16 14:51	02/18/16 21:01	1
Manganese	1.1		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:01	1
Nickel	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:01	1
Selenium	<0.050		0.050	0.020	mg/L		02/17/16 14:51	02/18/16 21:01	1
Silver	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:01	1
Zinc	0.18	J	0.50	0.020	mg/L		02/17/16 14:51	02/18/16 21:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.7		0.025	0.010	mg/L		02/18/16 16:36	02/19/16 19:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/17/16 14:51	02/18/16 16:02	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/17/16 14:51	02/18/16 16:02	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		02/17/16 16:15	02/18/16 13:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.025		0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.71		0.200	0.200	SU			02/13/16 12:08	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-10

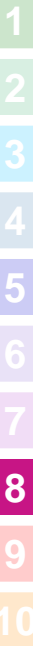
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107509
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		1009341-0008-01									
Project Name		Lab Project #		Date		Time		# of Containers		Matrix	
TL38		5001864									
Project Location/State		Lab PM		Date		Time		# of Containers		Matrix	
Kane County, IL		D. Wright									
Sampler		Lab PM		Date		Time		# of Containers		Matrix	
S-Coop		D. Wright									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix					
35		3011-92-B05 (0-1)	2-11-16	0905	2	S	X	X	X	X	X
36		3011-92-B04 (0-1)	2-11-16	0920	2	S	X	X	X	X	X
37		3011-92-B03 (0-1)	2-11-16	0930	2	S	X	X	X	X	X
38		3011-92-B02 (0-1)	2-11-16	0935	2	S	X	X	X	X	X
39		3011-92-B01 (0-1)	2-11-16	0940	2	S	X	X	X	X	X

- Preservative Key
- HCL, Cool to 4°
 - H2SO4, Cool to 4°
 - HNO3, Cool to 4°
 - NaOH, Cool to 4°
 - NaOH/Zn, Cool to 4°
 - NaHSO4
 - Cool to 4°
 - None
 - Other

Turnaround Time Required (Business Days)
 ___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days 10 Days ___ 15 Days ___ Other
 Requested Due Date _____

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

Relinquished By <i>[Signature]</i>	Company EE	Date 2-11-16	Time 1600	Received By <i>[Signature]</i>	Company TA	Date 2/11/16	Time 1000	Lab Courier <i>[Signature]</i>
Relinquished By <i>[Signature]</i>	Company TA	Date 2/11/16	Time 1735	Received By <i>[Signature]</i>	Company TA-CHT	Date 2/12/16	Time 0755	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: 500-107509-10

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
4450 Lincoln Highway ISGS #3011-93 (Illinois Youth Center - St. Charles)

City: St. Charles State: IL Zip Code: 60175

County: Kane Township: St. Charles

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

Latitude: 41.903802 Longitude: -88.375212
(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: See Att. A 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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.903802 Longitude: -88.375212

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)]:

Locations 3011-93-B02, B03, B05, B06, B08, and B09 were sampled within the construction zone adjacent to ISGS #3011-93 (Illinois Youth Center - St. Charles). Refer to PSI Report for ISGS #3011-93 (Illinois Youth Center - St. Charles) including Table 4-4, and Figures 4-14A&B.

- 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 J107456-1 .

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 Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown

Printed Name:

Neil J. Brown

3/17/16

Date:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:



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

LPC-663 3011-93 Attachment A

ISGS #3011-93 (Illinois Youth Center - St. Charles)

4450 Lincoln Highway St. Charles, Kane County, IL 60175

The following BOL numbers are all related the site listed above:

- 0434835010
- 0894835105
- 0894835147




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A
CONTAMINANTS OF CONCERN

SITE	ISGS #3011-93 (Illinois Youth Center - St. Charles)			Comparison Criteria			
	BORING	3011-93-B02	3011-93-B03	3011-93-B05	MACs		
SAMPLE	3011-93-B02 (0-1)	3011-93-B03 (0-1)	3011-93-B05 (0-1)				
MATRIX	Soil	Soil	Soil	Most Stringent	Within an MSA	Within Chicago	SCGIER
DEPTH (feet)	0-1	0-1	0-1				
pH	9	8.98	8.65				
VOCs (None Detected)							
SVOCs (mg/kg)							
2-Methylnaphthalene	0.02 J	ND U	0.55	--	--	--	--
Acenaphthene	ND U	0.018 J	0.024 J	570	--	--	--
Acenaphthylene	ND U	ND U	0.018 J	--	--	--	--
Anthracene	0.014 J	0.051	0.07	12,000	--	--	--
Benzo[a]anthracene	0.087	0.32	0.32	0.9	1.8	1.1	--
Benzo[a]pyrene	0.1 †	0.37 †	0.34 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.2	0.7	0.56	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.11	0.36	0.15	--	--	--	--
Benzo[k]fluoranthene	0.07	0.25	0.2	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.11 J	0.091 J	0.093 J	46	--	--	--
Chrysene	0.13	0.47	0.39	88	--	--	--
Dibenzo(a,h)anthracene	ND U	0.087	ND U	0.09	0.42	0.2	--
Dibenzofuran	ND U	ND U	0.19 J	--	--	--	--
Fluoranthene	0.13	0.52	0.48	3,100	--	--	--
Fluorene	ND U	0.019 J	0.021 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.1	0.37	0.17	0.9	1.6	0.9	--
Naphthalene	0.011 J	ND U	0.23	1.8	--	--	--
Phenanthrene	0.077	0.34	0.56	--	--	--	--
Phenol	ND U	63	ND U	100	--	--	--
Pyrene	0.31	1.2	1.1	2,300	--	--	--
Inorganics (mg/kg)							
Arsenic	6	4.8	6	11.3	13	--	--
Barium	43	66	93	1,500	--	--	--
Beryllium	0.39	0.55	0.75	22	--	--	--
Boron	6.8	11	18	40	--	--	--
Cadmium	0.049 J	0.093 J	0.65	5.2	--	--	--
Calcium	120,000	120,000	70,000	--	--	--	--
Chromium	14	16	14	21	--	--	--
Cobalt	6.7	6.4	8.3	20	--	--	--
Copper	19	14	21	2,900	--	--	--
Iron	14,000	13,000	18,000 †m	15,000	15,900	--	--
Lead	25	20	100	107	--	--	--
Magnesium	52,000	54,000	34,000	325,000	--	--	--
Manganese	370	630	570	630	636	--	--
Mercury	ND U	0.015 J	0.034	0.89	--	--	--
Nickel	16	16	17	100	--	--	--
Potassium	1,000	840	1,000	--	--	--	--
Selenium	0.65	ND U	0.54 J	1.3	--	--	--
Silver	ND U	ND U	0.077 J	4.4	--	--	--
Sodium	1,300	1,700	1,100	--	--	--	--
Thallium	ND U	ND U	ND U	2.6	--	--	--
Vanadium	19	21	21	550	--	--	--
Zinc	46	46	120	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	0.24 J	0.61	0.24 J	--	--	--	2
Boron	0.063 J	0.088 J	0.083 J	--	--	--	2
Cobalt	ND U	0.017 J	ND U	--	--	--	1
Iron	ND U	ND U	ND U	--	--	--	5
Lead	ND U	ND U	ND U	--	--	--	0.0075
Manganese	1.8 L	6.2 L	1.2 L	--	--	--	0.15
Nickel	ND U	0.016 J	ND U	--	--	--	0.1
Zinc	ND U	ND U	ND U	--	--	--	5
SPLP Metals (mg/L)							
Lead	NA	NA	NA	--	--	--	0.0075
Manganese	ND U	0.15	ND U	--	--	--	0.15

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A
CONTAMINANTS OF CONCERN**

SITE	ISGS #3011-93 (Illinois Youth Center - St. Charles)				Comparison Criteria			
	3011-93-B06		3011-93-B08	3011-93-B09	MACs			TACO
BORING	3011-93-B06 (0-1)	3011-93-B06 (0-1)D	3011-93-B08 (0-1)	3011-93-B09 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
SAMPLE								
MATRIX	Soil	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	0-1				
pH	8.96	8.79	8.74	8.93				
VOCs (None Detected)								
SVOCs (mg/kg)								
2-Methylnaphthalene	0.034 J	0.035 J	0.023 J	ND U	--	--	--	--
Acenaphthene	0.054	ND U	ND U	ND UJ	570	--	--	--
Acenaphthylene	0.0074 J	ND U	ND U	ND UJ	--	--	--	--
Anthracene	0.15	0.038 J	0.025 J	0.02 J	12,000	--	--	--
Benzo[a]anthracene	0.42	0.26	0.16	0.16	0.9	1.8	1.1	--
Benzo[a]pyrene	0.42 †	0.31 †	0.18 †	0.18 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.79	0.56	0.34	0.32	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.17	0.16	0.077	0.077	--	--	--	--
Benzo[k]fluoranthene	0.81 J	0.24 J	0.12	0.12	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.074 J	0.1 J	ND U	ND U	46	--	--	--
Chrysene	0.49	0.34	0.21	0.21	88	--	--	--
Dibenzo(a,h)anthracene	0.047	0.038 J	0.019 J	0.021 J	0.09	0.42	0.2	--
Dibenzofuran	ND U	ND U	ND U	ND UJ	--	--	--	--
Fluoranthene	0.93	0.62	0.34	0.3	3,100	--	--	--
Fluorene	0.062	0.0085 J	0.0086 J	0.008 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.21	0.17	0.092	0.089	0.9	1.6	0.9	--
Naphthalene	0.015 J	0.012 J	0.011 J	0.017 J	1.8	--	--	--
Phenanthrene	0.66 J	0.27 J	0.16	0.13	--	--	--	--
Phenol	ND U	ND U	ND U	ND U	100	--	--	--
Pyrene	1.3	0.84	0.41	0.35 J	2,300	--	--	--
Inorganics (mg/kg)								
Arsenic	5.8	4	5.3	6.4 J	11.3	13	--	--
Barium	50	35	64	66 J	1,500	--	--	--
Beryllium	0.39	0.45	0.42	0.55	22	--	--	--
Boron	11	13	8.1	8.6 J	40	--	--	--
Cadmium	0.66	0.32	0.37	0.18	5.2	--	--	--
Calcium	84,000	140,000	85,000	70,000 J	--	--	--	--
Chromium	20	13	18	16 J	21	--	--	--
Cobalt	6.6	4.8	6.9	7.8 J	20	--	--	--
Copper	41	23	23	19	2,900	--	--	--
Iron	26,000 J †m	11,000 J	14,000	15,000 J	15,000	15,900	--	--
Lead	190 †	110 †	170 †	92	107	--	--	--
Magnesium	38,000 J	81,000 J	38,000	41,000 J	325,000	--	--	--
Manganese	480	360	520	470 J	630	636	--	--
Mercury	0.023	0.02	0.025	0.022	0.89	--	--	--
Nickel	20	13	15	17 J	100	--	--	--
Potassium	950	820	1,000	940 J	--	--	--	--
Selenium	ND U	0.65	ND U	0.47 J	1.3	--	--	--
Silver	0.1 J	0.097 J	ND U	ND U	4.4	--	--	--
Sodium	1,300	1,000	2,500	1,600 J	--	--	--	--
Thallium	ND U	0.35 J	ND U	ND U	2.6	--	--	--
Vanadium	18	15	20	23 J	550	--	--	--
Zinc	130	91	100	89 J	5,100	--	--	--
TCLP Metals (mg/L)								
Barium	0.22 J	0.2 J	0.36 J	0.35 J	--	--	--	2
Boron	0.078 J	0.087 J	0.095 J	0.075 J	--	--	--	2
Cobalt	ND U	0.011 J	ND U	ND U	--	--	--	1
Iron	ND U	ND U	ND U	ND U	--	--	--	5
Lead	0.016 L	0.012 L	ND U	ND U	--	--	--	0.0075
Manganese	1.9 L	2.2 L	1.3 L	1.6 J L	--	--	--	0.15
Nickel	ND U	ND U	ND U	ND U	--	--	--	0.1
Zinc	0.17 J	ND U	ND U	ND U	--	--	--	5
SPLP Metals (mg/L)								
Lead	ND U	ND U	NA	NA	--	--	--	0.0075
Manganese	0.026	0.064	0.26 L	1.4 J 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: 500-107456-1
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
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Jodie Bracken, Project Management Assistant II
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Designee for
Richard Wright, Senior Project Manager
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richard.wright@testamericainc.com

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Job ID: 500-107456-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-1

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample duplicate (LCSD) for batch 500-323207 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 3011-93-B05 (0-1) (500-107456-6).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8260B: Due to internal standard (ISTD) area failures, a dilution was required for the following sample: 3011-93-B03 (0-1) (500-107456-8). The sample was initially analyzed without dilution. All internal standards were outside the QC limits. The sample was re-analyzed with similar results. No usable data was obtained from the un-diluted runs. The sample was re-analyzed at a dilution using the methanol extraction method. All internal standard areas were within limits in the diluted run. Elevated reporting limits have been provided.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-93-B08 (0-1) (500-107456-2), 3011-93-B07 (0-1) (500-107456-3), 3011-93-B06 (0-1) (500-107456-4), 3011-93-B06 (0-1) (500-107456-5), 3011-93-B05 (0-1) (500-107456-6), 3011-93-B04 (0-1) (500-107456-7), 3011-93-B02 (0-1) (500-107456-9), 3011-93-B01 (0-1) (500-107456-10), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample required a dilution due to the nature of the sample matrix: 3011-93-B03 (0-1) (500-107456-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Job ID: 500-107456-1 (Continued)

Laboratory: TestAmerica Chicago (Continued)

than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-93-B09 (0-1) (500-107456-1), 3011-93-B08 (0-1) (500-107456-2), 3011-93-B07 (0-1) (500-107456-3), 3011-93-B06 (0-1) (500-107456-4), 3011-93-B06 (0-1)D (500-107456-5), 3011-93-B05 (0-1) (500-107456-6), 3011-93-B04 (0-1) (500-107456-7), 3011-93-B03 (0-1) (500-107456-8), 3011-93-B02 (0-1) (500-107456-9) and 3011-93-B01 (0-1) (500-107456-10). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

Method(s) 6010B: The following samples were diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-93-B06 (0-1)D (500-107456-5) and 3011-93-B01 (0-1) (500-107456-10). Elevated reporting limits (RLs) are provided.

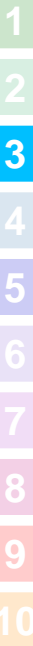
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.017	J	0.040	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0080	J F1	0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.020	J	0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.30		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.35	F1	0.040	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.16		0.040	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.21		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.32		0.040	0.0088	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18		0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.089		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.021	J	0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.077		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.4	F1 F2	0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	66	F1 F2	0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.55	F2	0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	8.6	F1 F2	2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	70000	B F2	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	16	F2 F1 B	0.56	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.8	F2	0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	15000	F2 B ^	11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	92		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	41000	B F2	56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	470	F2 B	0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	17	F2 B	0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	940	F1 F2	28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.47	J F1 F2	0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	1600	B F1	56	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23	F1 F2	0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	89	F1 F2	1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.075	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.6	F1	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.067	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.4	F1	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.022		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.93		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-93-B08 (0-1)

Lab Sample ID: 500-107456-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.011	J	0.041	0.0064	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.023	J	0.041	0.0077	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0086	J	0.041	0.0059	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.16		0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.025	J	0.041	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.34		0.041	0.0077	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B08 (0-1) (Continued)

Lab Sample ID: 500-107456-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.41		0.041	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.16		0.041	0.0056	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.21		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.34		0.041	0.0090	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18		0.041	0.0081	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.092		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.019	J	0.041	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.077		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.3		0.61	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	64		0.61	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.42		0.25	0.053	mg/Kg	1	☼	6010B	Total/NA
Boron	8.1		3.1	0.43	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.37		0.12	0.036	mg/Kg	1	☼	6010B	Total/NA
Calcium	85000	B	120	40	mg/Kg	10	☼	6010B	Total/NA
Chromium	18	B	0.61	0.11	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.9		0.31	0.069	mg/Kg	1	☼	6010B	Total/NA
Copper	23		0.61	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B ^	12	4.7	mg/Kg	1	☼	6010B	Total/NA
Lead	170		0.31	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	38000	B ^	6.1	2.5	mg/Kg	1	☼	6010B	Total/NA
Manganese	520	B	0.61	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	15	B	0.61	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	1000		31	5.0	mg/Kg	1	☼	6010B	Total/NA
Sodium	2500	B	61	8.1	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.31	0.090	mg/Kg	1	☼	6010B	Total/NA
Zinc	100		1.2	0.39	mg/Kg	1	☼	6010B	Total/NA
Barium	0.36	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.095	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.3		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.063	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.26		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.025		0.019	0.0097	mg/Kg	1	☼	7471B	Total/NA
pH	8.74		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1



Client Sample ID: 3011-93-B06 (0-1)

Lab Sample ID: 500-107456-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Naphthalene	0.015	J	0.039	0.0061	mg/Kg	1	✳		8270D	Total/NA
2-Methylnaphthalene	0.034	J	0.039	0.0073	mg/Kg	1	✳		8270D	Total/NA
Acenaphthylene	0.0074	J	0.039	0.0052	mg/Kg	1	✳		8270D	Total/NA
Acenaphthene	0.054		0.039	0.0071	mg/Kg	1	✳		8270D	Total/NA
Fluorene	0.062		0.039	0.0056	mg/Kg	1	✳		8270D	Total/NA
Phenanthrene	0.66		0.039	0.0055	mg/Kg	1	✳		8270D	Total/NA
Anthracene	0.15		0.039	0.0066	mg/Kg	1	✳		8270D	Total/NA
Fluoranthene	0.93		0.039	0.0074	mg/Kg	1	✳		8270D	Total/NA
Pyrene	1.3		0.039	0.0079	mg/Kg	1	✳		8270D	Total/NA
Benzo[a]anthracene	0.42		0.039	0.0053	mg/Kg	1	✳		8270D	Total/NA
Chrysene	0.49		0.039	0.011	mg/Kg	1	✳		8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.074	J	0.20	0.073	mg/Kg	1	✳		8270D	Total/NA
Benzo[b]fluoranthene	0.79		0.039	0.0086	mg/Kg	1	✳		8270D	Total/NA
Benzo[k]fluoranthene	0.81		0.039	0.012	mg/Kg	1	✳		8270D	Total/NA
Benzo[a]pyrene	0.42		0.039	0.0077	mg/Kg	1	✳		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.21		0.039	0.010	mg/Kg	1	✳		8270D	Total/NA
Dibenz(a,h)anthracene	0.047		0.039	0.0077	mg/Kg	1	✳		8270D	Total/NA
Benzo[g,h,i]perylene	0.17		0.039	0.013	mg/Kg	1	✳		8270D	Total/NA
Arsenic	5.8		0.56	0.26	mg/Kg	1	✳		6010B	Total/NA
Barium	50		0.56	0.10	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1) (Continued)

Lab Sample ID: 500-107456-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.39		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	11		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.66		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	84000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	20	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.6		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	41		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	26000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	190		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	38000	B ^	5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	480	B	0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	20	B	0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	950		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Silver	0.10	J	0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300	B	56	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	130		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.22	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.078	J	0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.016		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	1.9		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.17	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.026		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.96		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-93-B06 (0-1)D

Lab Sample ID: 500-107456-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.012	J	0.039	0.0060	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.035	J	0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0085	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.27		0.039	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.038	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.62		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.84		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.26		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.34		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.10	J	0.20	0.071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.56		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.24		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.31		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.17		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.038	J	0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.16		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.0		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	35		0.50	0.092	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.45		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	13		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.32		0.10	0.029	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)D (Continued)

Lab Sample ID: 500-107456-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	140000	B	100	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	13	B	0.50	0.086	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.8		0.25	0.057	mg/Kg	1	☼	6010B	Total/NA
Copper	23		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	11000	B ^	10	3.9	mg/Kg	1	☼	6010B	Total/NA
Lead	110		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	81000	B	50	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	360	B	0.50	0.099	mg/Kg	1	☼	6010B	Total/NA
Nickel	13	B	0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	820		25	4.1	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.65		0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Silver	0.097	J	0.25	0.059	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000	B	50	6.6	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.35	J	0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.25	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	91		10	3.2	mg/Kg	10	☼	6010B	Total/NA
Barium	0.20	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.087	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.012		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	2.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.15	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.064		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.020		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.79		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-93-B05 (0-1)

Lab Sample ID: 500-107456-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.23		0.041	0.0064	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.55		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.018	J	0.041	0.0054	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.024	J	0.041	0.0074	mg/Kg	1	☼	8270D	Total/NA
Dibenzofuran	0.19	J	0.21	0.048	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.021	J	0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.56		0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.070		0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.48		0.041	0.0077	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.1		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.32		0.041	0.0056	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.39		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.093	J	0.21	0.075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.56		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.20		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.34		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.17		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.15		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.0		0.58	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	93		0.58	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.75		0.23	0.050	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B05 (0-1) (Continued)

Lab Sample ID: 500-107456-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	18		2.9	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.65		0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	70000	B	120	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	14	B	0.58	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.3		0.29	0.066	mg/Kg	1	☼	6010B	Total/NA
Copper	21		0.58	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	18000	B ^	12	4.5	mg/Kg	1	☼	6010B	Total/NA
Lead	100		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	34000	B ^	5.8	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	570	B	0.58	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	17	B	0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	1000		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.54	J	0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Silver	0.077	J	0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100	B	58	7.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.29	0.085	mg/Kg	1	☼	6010B	Total/NA
Zinc	120		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.24	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.083	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.094	J B	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.034		0.019	0.0099	mg/Kg	1	☼	7471B	Total/NA
pH	8.65		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1



Client Sample ID: 3011-93-B03 (0-1)

Lab Sample ID: 500-107456-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.018	J	0.039	0.0070	mg/Kg	1	*	*	8270D	Total/NA
Fluorene	0.019	J	0.039	0.0055	mg/Kg	1	*	*	8270D	Total/NA
Phenanthrene	0.34		0.039	0.0055	mg/Kg	1	*	*	8270D	Total/NA
Anthracene	0.051		0.039	0.0065	mg/Kg	1	*	*	8270D	Total/NA
Fluoranthene	0.52		0.039	0.0073	mg/Kg	1	*	*	8270D	Total/NA
Pyrene	1.2		0.039	0.0078	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]anthracene	0.32		0.039	0.0053	mg/Kg	1	*	*	8270D	Total/NA
Chrysene	0.47		0.039	0.011	mg/Kg	1	*	*	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.091	J	0.20	0.072	mg/Kg	1	*	*	8270D	Total/NA
Benzo[b]fluoranthene	0.70		0.039	0.0085	mg/Kg	1	*	*	8270D	Total/NA
Benzo[k]fluoranthene	0.25		0.039	0.012	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]pyrene	0.37		0.039	0.0076	mg/Kg	1	*	*	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.37		0.039	0.010	mg/Kg	1	*	*	8270D	Total/NA
Dibenz(a,h)anthracene	0.087		0.039	0.0076	mg/Kg	1	*	*	8270D	Total/NA
Benzo[g,h,i]perylene	0.36		0.039	0.013	mg/Kg	1	*	*	8270D	Total/NA
Phenol - DL	63		20	8.7	mg/Kg	100	*	*	8270D	Total/NA
Arsenic	4.8		0.60	0.28	mg/Kg	1	*	*	6010B	Total/NA
Barium	66		0.60	0.11	mg/Kg	1	*	*	6010B	Total/NA
Beryllium	0.55		0.24	0.052	mg/Kg	1	*	*	6010B	Total/NA
Boron	11		3.0	0.42	mg/Kg	1	*	*	6010B	Total/NA
Cadmium	0.093	J	0.12	0.035	mg/Kg	1	*	*	6010B	Total/NA
Calcium	120000	B	120	39	mg/Kg	10	*	*	6010B	Total/NA
Chromium	16	B	0.60	0.10	mg/Kg	1	*	*	6010B	Total/NA
Cobalt	6.4		0.30	0.068	mg/Kg	1	*	*	6010B	Total/NA
Copper	14		0.60	0.13	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B03 (0-1) (Continued)

Lab Sample ID: 500-107456-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	13000	B ^	12	4.7	mg/Kg	1	☼	6010B	Total/NA
Lead	20		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	54000	B ^	6.0	2.5	mg/Kg	1	☼	6010B	Total/NA
Manganese	630	B	0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	16	B	0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	840		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700	B	60	8.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.30	0.088	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		1.2	0.38	mg/Kg	1	☼	6010B	Total/NA
Barium	0.61		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.088	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	6.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.095	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.15		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.98		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-93-B02 (0-1)

Lab Sample ID: 500-107456-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.011	J	0.040	0.0062	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.020	J	0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.077		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.040	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.31		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.087		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.11	J	0.20	0.073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.040	0.0087	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.070		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.10		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.11		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.0		0.59	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	43		0.59	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.39		0.24	0.051	mg/Kg	1	☼	6010B	Total/NA
Boron	6.8		2.9	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.049	J	0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	14	B	0.59	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.7		0.29	0.067	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.59	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B ^	12	4.5	mg/Kg	1	☼	6010B	Total/NA
Lead	25		0.29	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	52000	B ^	5.9	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	370	B	0.59	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	16	B	0.59	0.16	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B02 (0-1) (Continued)

Lab Sample ID: 500-107456-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	1000		29	4.8	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.65		0.59	0.29	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300	B	59	7.8	mg/Kg	1	☼	6010B	Total/NA
Vanadium	19		0.29	0.086	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.24	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.063	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.8		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.031	J B	0.50	0.020	mg/L	1		6010B	TCLP
pH	9.00		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-1	3011-93-B09 (0-1)	Solid	02/10/16 14:05	02/11/16 07:40
500-107456-2	3011-93-B08 (0-1)	Solid	02/10/16 14:15	02/11/16 07:40
500-107456-4	3011-93-B06 (0-1)	Solid	02/10/16 14:25	02/11/16 07:40
500-107456-5	3011-93-B06 (0-1)D	Solid	02/10/16 14:25	02/11/16 07:40
500-107456-6	3011-93-B05 (0-1)	Solid	02/10/16 14:35	02/11/16 07:40
500-107456-8	3011-93-B03 (0-1)	Solid	02/10/16 16:00	02/11/16 07:40
500-107456-9	3011-93-B02 (0-1)	Solid	02/10/16 16:05	02/11/16 07:40



Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Bromodichloromethane	<0.0048		0.0048	0.00080	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Bromoform	<0.0048		0.0048	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Bromomethane	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Carbon disulfide	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chloroethane	<0.0048	*	0.0048	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chloromethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1-Dichloroethane	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,2-Dichloroethane	<0.0048		0.0048	0.00070	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,2-Dichloropropane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,3-Dichloropropane, Total	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1,1,2-Tetrachloroethane	<0.0048		0.0048	0.00075	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Tetrachloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00092	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 122	02/11/16 08:15	02/18/16 06:16	1
Dibromofluoromethane	99		75 - 120	02/11/16 08:15	02/18/16 06:16	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 134	02/11/16 08:15	02/18/16 06:16	1
Toluene-d8 (Surr)	102		75 - 122	02/11/16 08:15	02/18/16 06:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.090	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Bis(2-chloroethyl)ether	<0.20	F1	0.20	0.061	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
1,3-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
1,4-Dichlorobenzene	<0.20	F1	0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20	F1	0.20	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Methylphenol	<0.20	F1 F2	0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
N-Nitrosodi-n-propylamine	<0.082		0.082	0.050	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachloroethane	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Isophorone	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dimethylphenol	<0.40	F1	0.40	0.15	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachlorobutadiene	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Naphthalene	0.017	J	0.040	0.0063	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dichlorophenol	<0.40	F1	0.40	0.097	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Chloroaniline	<0.82	F1 F2	0.82	0.19	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4,6-Trichlorophenol	<0.40	F1	0.40	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4,5-Trichlorophenol	<0.40		0.40	0.093	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachlorocyclopentadiene	<0.82	F1	0.82	0.23	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Methylnaphthalene	<0.040	F1	0.040	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Nitroaniline	<0.20	F1	0.20	0.055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Chloronaphthalene	<0.20	F1	0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Chloro-3-methylphenol	<0.40	F1	0.40	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,6-Dinitrotoluene	<0.20	F1	0.20	0.080	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Nitrophenol	<0.40		0.40	0.096	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Dimethyl phthalate	<0.20	F1	0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dinitrophenol	<0.82	F1	0.82	0.72	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Acenaphthylene	<0.040	F1	0.040	0.0054	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dinitrotoluene	<0.20	F1	0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Acenaphthene	<0.040	F1	0.040	0.0073	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Dibenzofuran	<0.20	F1	0.20	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Nitrophenol	<0.82		0.82	0.39	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Fluorene	0.0080	J F1	0.040	0.0057	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.054	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachlorobenzene	<0.082		0.082	0.0094	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Diethyl phthalate	<0.20	F1	0.20	0.069	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Chlorophenyl phenyl ether	<0.20	F1	0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Pentachlorophenol	<0.82		0.82	0.65	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4,6-Dinitro-2-methylphenol	<0.82		0.82	0.33	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Phenanthrene	0.13		0.040	0.0057	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Anthracene	0.020	J	0.040	0.0068	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Fluoranthene	0.30		0.040	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Pyrene	0.35	F1	0.040	0.0081	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Butyl benzyl phthalate	<0.20	F1	0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[a]anthracene	0.16		0.040	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.21		0.040	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
3,3'-Dichlorobenzidine	<0.20	F1 F2	0.20	0.057	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Bis(2-ethylhexyl) phthalate	<0.20	F1	0.20	0.074	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[b]fluoranthene	0.32		0.040	0.0088	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[k]fluoranthene	0.12		0.040	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[a]pyrene	0.18		0.040	0.0079	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Indeno[1,2,3-cd]pyrene	0.089		0.040	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Dibenz(a,h)anthracene	0.021	J	0.040	0.0079	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[g,h,i]perylene	0.077		0.040	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
3 & 4 Methylphenol	<0.20		0.20	0.068	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	78		25 - 110	02/12/16 07:17	02/22/16 19:17	1
Phenol-d5	84		31 - 110	02/12/16 07:17	02/22/16 19:17	1
Nitrobenzene-d5	72		25 - 115	02/12/16 07:17	02/22/16 19:17	1
2-Fluorobiphenyl	87		25 - 119	02/12/16 07:17	02/22/16 19:17	1
2,4,6-Tribromophenol	90		35 - 137	02/12/16 07:17	02/22/16 19:17	1
Terphenyl-d14	108		36 - 134	02/12/16 07:17	02/22/16 19:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1	F1	1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Arsenic	6.4	F1 F2	0.56	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Barium	66	F1 F2	0.56	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Beryllium	0.55	F2	0.23	0.049	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Boron	8.6	F1 F2	2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Cadmium	0.18		0.11	0.033	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Calcium	70000	B F2	110	36	mg/Kg	☼	02/17/16 09:04	02/21/16 00:32	10
Chromium	16	F2 F1 B	0.56	0.097	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Cobalt	7.8	F2	0.28	0.064	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Copper	19		0.56	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Iron	15000	F2 B ^	11	4.4	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Lead	92		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Magnesium	41000	B F2	56	23	mg/Kg	☼	02/17/16 09:04	02/21/16 00:32	10
Manganese	470	F2 B	0.56	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Nickel	17	F2 B	0.56	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Potassium	940	F1 F2	28	4.6	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Selenium	0.47	J F1 F2	0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Sodium	1600	B F1	56	7.5	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Thallium	<0.56	F2	0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Vanadium	23	F1 F2	0.28	0.082	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Zinc	89	F1 F2	1.1	0.36	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.35	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 03:53	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 03:53	1
Boron	0.075	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 03:53	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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		02/14/16 08:30	02/16/16 03:53	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 03:53	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 03:53	1
Manganese	1.6	F1	0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 03:53	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Zinc	0.067	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 03:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.4	F1	0.025	0.010	mg/L		02/16/16 08:23	02/18/16 21:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 14:19	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 14:19	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 09:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.022		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.93		0.200	0.200	SU			02/13/16 09:35	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B08 (0-1)

Lab Sample ID: 500-107456-2

Date Collected: 02/10/16 14:15

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0032	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Benzene	<0.0041		0.0041	0.00091	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Bromodichloromethane	<0.0041		0.0041	0.00069	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Bromoform	<0.0041		0.0041	0.00084	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
2-Butanone (MEK)	<0.0041		0.0041	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Carbon disulfide	<0.0041		0.0041	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Carbon tetrachloride	<0.0041		0.0041	0.00088	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Chlorobenzene	<0.0041		0.0041	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Chloroethane	<0.0041	*	0.0041	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Chloroform	<0.0041		0.0041	0.00080	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Chloromethane	<0.0041		0.0041	0.00098	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
cis-1,2-Dichloroethene	<0.0041		0.0041	0.00084	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
cis-1,3-Dichloropropene	<0.0041		0.0041	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Dibromochloromethane	<0.0041		0.0041	0.00047	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,1-Dichloroethane	<0.0041		0.0041	0.00084	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,2-Dichloroethane	<0.0041		0.0041	0.00061	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,1-Dichloroethene	<0.0041		0.0041	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,2-Dichloropropane	<0.0041		0.0041	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,3-Dichloropropane, Total	<0.0041		0.0041	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Ethylbenzene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Methylene Chloride	<0.0041		0.0041	0.0031	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.00084	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Methyl tert-butyl ether	<0.0041		0.0041	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Styrene	<0.0041		0.0041	0.00096	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,1,2,2-Tetrachloroethane	<0.0041		0.0041	0.00065	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Tetrachloroethene	<0.0041		0.0041	0.00085	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Toluene	<0.0041		0.0041	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
trans-1,2-Dichloroethene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
trans-1,3-Dichloropropene	<0.0041		0.0041	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,1,1-Trichloroethane	<0.0041		0.0041	0.00095	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
1,1,2-Trichloroethane	<0.0041		0.0041	0.00079	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Trichloroethene	<0.0041		0.0041	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Vinyl acetate	<0.0041		0.0041	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Vinyl chloride	<0.0041		0.0041	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1
Xylenes, Total	<0.0082		0.0082	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 122	02/11/16 08:15	02/18/16 06:42	1
Dibromofluoromethane	99		75 - 120	02/11/16 08:15	02/18/16 06:42	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	02/11/16 08:15	02/18/16 06:42	1
Toluene-d8 (Surr)	103		75 - 122	02/11/16 08:15	02/18/16 06:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.093	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B08 (0-1)

Lab Sample ID: 500-107456-2

Date Collected: 02/10/16 14:15

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2-Methylphenol	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
N-Nitrosodi-n-propylamine	<0.084		0.084	0.051	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Naphthalene	0.011	J	0.041	0.0064	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,4-Dichlorophenol	<0.41		0.41	0.099	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4-Chloroaniline	<0.84		0.84	0.20	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,4,5-Trichlorophenol	<0.41		0.41	0.095	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Hexachlorocyclopentadiene	<0.84		0.84	0.24	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2-Methylnaphthalene	0.023	J	0.041	0.0077	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,6-Dinitrotoluene	<0.21		0.21	0.082	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2-Nitrophenol	<0.41		0.41	0.099	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,4-Dinitrophenol	<0.84		0.84	0.74	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Acenaphthylene	<0.041		0.041	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
2,4-Dinitrotoluene	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Acenaphthene	<0.041		0.041	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4-Nitrophenol	<0.84		0.84	0.40	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Fluorene	0.0086	J	0.041	0.0059	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Hexachlorobenzene	<0.084		0.084	0.0097	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Diethyl phthalate	<0.21		0.21	0.071	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Pentachlorophenol	<0.84		0.84	0.67	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
4,6-Dinitro-2-methylphenol	<0.84		0.84	0.34	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Phenanthrene	0.16		0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Anthracene	0.025	J	0.041	0.0070	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Fluoranthene	0.34		0.041	0.0077	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Pyrene	0.41		0.041	0.0083	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Butyl benzyl phthalate	<0.21		0.21	0.079	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Benzo[a]anthracene	0.16		0.041	0.0056	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B08 (0-1)

Lab Sample ID: 500-107456-2

Date Collected: 02/10/16 14:15

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.21		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.076	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Di-n-octyl phthalate	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Benzo[b]fluoranthene	0.34		0.041	0.0090	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Benzo[k]fluoranthene	0.12		0.041	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Benzo[a]pyrene	0.18		0.041	0.0081	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Indeno[1,2,3-cd]pyrene	0.092		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Dibenz(a,h)anthracene	0.019	J	0.041	0.0081	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
Benzo[g,h,i]perylene	0.077		0.041	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1
3 & 4 Methylphenol	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/22/16 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	85		25 - 110	02/12/16 07:17	02/22/16 19:43	1
Phenol-d5	86		31 - 110	02/12/16 07:17	02/22/16 19:43	1
Nitrobenzene-d5	79		25 - 115	02/12/16 07:17	02/22/16 19:43	1
2-Fluorobiphenyl	86		25 - 119	02/12/16 07:17	02/22/16 19:43	1
2,4,6-Tribromophenol	98		35 - 137	02/12/16 07:17	02/22/16 19:43	1
Terphenyl-d14	139	X	36 - 134	02/12/16 07:17	02/22/16 19:43	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Arsenic	5.3		0.61	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Barium	64		0.61	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Beryllium	0.42		0.25	0.053	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Boron	8.1		3.1	0.43	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Cadmium	0.37		0.12	0.036	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Calcium	85000	B	120	40	mg/Kg	☼	02/17/16 09:04	02/21/16 01:21	10
Chromium	18	B	0.61	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Cobalt	6.9		0.31	0.069	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Copper	23		0.61	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Iron	14000	B ^	12	4.7	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Lead	170		0.31	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Magnesium	38000	B ^	6.1	2.5	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Manganese	520	B	0.61	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Nickel	15	B	0.61	0.17	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Potassium	1000		31	5.0	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Selenium	<0.61		0.61	0.30	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Silver	<0.31		0.31	0.072	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Sodium	2500	B	61	8.1	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Thallium	<0.61		0.61	0.30	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Vanadium	20		0.31	0.090	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1
Zinc	100		1.2	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 00:45	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.36	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 04:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 04:20	1
Boron	0.095	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 04:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B08 (0-1)

Lab Sample ID: 500-107456-2

Date Collected: 02/10/16 14:15

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.4

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		02/14/16 08:30	02/16/16 04:20	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:20	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:20	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 04:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 04:20	1
Manganese	1.3		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:20	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:20	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 04:20	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:20	1
Zinc	0.063	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 04:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.26		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 21:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 14:35	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 14:35	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		02/15/16 13:50	02/16/16 09:50	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.025		0.019	0.0097	mg/Kg	☼	02/16/16 16:00	02/17/16 17:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.74		0.200	0.200	SU			02/13/16 09:38	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)

Lab Sample ID: 500-107456-4

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.028		0.028	0.0054	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Benzene	<0.0070		0.0070	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Bromodichloromethane	<0.0070		0.0070	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Bromoform	<0.0070		0.0070	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Bromomethane	<0.0070		0.0070	0.0026	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
2-Butanone (MEK)	<0.0070		0.0070	0.0025	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Carbon disulfide	<0.0070		0.0070	0.0026	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Carbon tetrachloride	<0.0070		0.0070	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Chlorobenzene	<0.0070		0.0070	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Chloroethane	<0.0070	*	0.0070	0.0030	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Chloroform	<0.0070		0.0070	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Chloromethane	<0.0070		0.0070	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
cis-1,2-Dichloroethene	<0.0070		0.0070	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
cis-1,3-Dichloropropene	<0.0070		0.0070	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Dibromochloromethane	<0.0070		0.0070	0.00081	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,1-Dichloroethane	<0.0070		0.0070	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,2-Dichloroethane	<0.0070		0.0070	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,1-Dichloroethene	<0.0070		0.0070	0.0026	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,2-Dichloropropane	<0.0070		0.0070	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,3-Dichloropropane, Total	<0.0070		0.0070	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Ethylbenzene	<0.0070		0.0070	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
2-Hexanone	<0.0070		0.0070	0.0022	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Methylene Chloride	<0.0070		0.0070	0.0053	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
4-Methyl-2-pentanone (MIBK)	<0.0070		0.0070	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Methyl tert-butyl ether	<0.0070		0.0070	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Styrene	<0.0070		0.0070	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,1,2,2-Tetrachloroethane	<0.0070		0.0070	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Tetrachloroethene	<0.0070		0.0070	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Toluene	<0.0070		0.0070	0.0024	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
trans-1,2-Dichloroethene	<0.0070		0.0070	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
trans-1,3-Dichloropropene	<0.0070		0.0070	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,1,1-Trichloroethane	<0.0070		0.0070	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
1,1,2-Trichloroethane	<0.0070		0.0070	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Trichloroethene	<0.0070		0.0070	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Vinyl acetate	<0.0070		0.0070	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Vinyl chloride	<0.0070		0.0070	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1
Xylenes, Total	<0.014		0.014	0.0026	mg/Kg	☼	02/11/16 08:15	02/18/16 07:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 122	02/11/16 08:15	02/18/16 07:34	1
Dibromofluoromethane	93		75 - 120	02/11/16 08:15	02/18/16 07:34	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134	02/11/16 08:15	02/18/16 07:34	1
Toluene-d8 (Surr)	103		75 - 122	02/11/16 08:15	02/18/16 07:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)

Lab Sample ID: 500-107456-4

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 80.3

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	☼	02/12/16 07:17	02/22/16 20:35	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Naphthalene	0.015	J	0.039	0.0061	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,4,5-Trichlorophenol	<0.39		0.39	0.091	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2-Methylnaphthalene	0.034	J	0.039	0.0073	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4-Chloro-3-methylphenol	<0.39		0.39	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2-Nitrophenol	<0.39		0.39	0.094	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Acenaphthylene	0.0074	J	0.039	0.0052	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Acenaphthene	0.054		0.039	0.0071	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Fluorene	0.062		0.039	0.0056	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Phenanthrene	0.66		0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Anthracene	0.15		0.039	0.0066	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Fluoranthene	0.93		0.039	0.0074	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Pyrene	1.3		0.039	0.0079	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Benzo[a]anthracene	0.42		0.039	0.0053	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)

Lab Sample ID: 500-107456-4

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.49		0.039	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Bis(2-ethylhexyl) phthalate	0.074	J	0.20	0.073	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Benzo[b]fluoranthene	0.79		0.039	0.0086	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Benzo[k]fluoranthene	0.81		0.039	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Benzo[a]pyrene	0.42		0.039	0.0077	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Indeno[1,2,3-cd]pyrene	0.21		0.039	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Dibenz(a,h)anthracene	0.047		0.039	0.0077	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
Benzo[g,h,i]perylene	0.17		0.039	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 20:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	85		25 - 110	02/12/16 07:17	02/22/16 20:35	1
Phenol-d5	86		31 - 110	02/12/16 07:17	02/22/16 20:35	1
Nitrobenzene-d5	78		25 - 115	02/12/16 07:17	02/22/16 20:35	1
2-Fluorobiphenyl	84		25 - 119	02/12/16 07:17	02/22/16 20:35	1
2,4,6-Tribromophenol	104		35 - 137	02/12/16 07:17	02/22/16 20:35	1
Terphenyl-d14	163	X	36 - 134	02/12/16 07:17	02/22/16 20:35	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Arsenic	5.8		0.56	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Barium	50		0.56	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Beryllium	0.39		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Boron	11		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Cadmium	0.66		0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Calcium	84000	B	110	36	mg/Kg	☼	02/17/16 09:04	02/21/16 01:35	10
Chromium	20	B	0.56	0.096	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Cobalt	6.6		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Copper	41		0.56	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Iron	26000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Lead	190		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Magnesium	38000	B ^	5.6	2.3	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Manganese	480	B	0.56	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Nickel	20	B	0.56	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Potassium	950		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Silver	0.10	J	0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Sodium	1300	B	56	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Thallium	<0.56		0.56	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Vanadium	18		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1
Zinc	130		1.1	0.35	mg/Kg	☼	02/17/16 09:04	02/20/16 00:55	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.22	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 04:34	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 04:34	1
Boron	0.078	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 04:34	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)

Lab Sample ID: 500-107456-4

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 80.3

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		02/14/16 08:30	02/16/16 04:34	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:34	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:34	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 04:34	1
Lead	0.016		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 04:34	1
Manganese	1.9		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:34	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:34	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 04:34	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:34	1
Zinc	0.17	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 04:34	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.0075		0.0075	0.0075	mg/L		02/16/16 08:23	02/18/16 22:22	1
Manganese	0.026		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 22:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 14:43	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 14:43	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		02/15/16 13:50	02/16/16 09:58	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.019	0.010	mg/Kg	☼	02/16/16 16:00	02/17/16 17:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.96		0.200	0.200	SU			02/13/16 09:42	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)D

Lab Sample ID: 500-107456-5

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Bromodichloromethane	<0.0048		0.0048	0.00081	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Bromoform	<0.0048		0.0048	0.00097	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Bromomethane	<0.0048	*	0.0048	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Chloromethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00097	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,1-Dichloroethane	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Tetrachloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00092	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Vinyl acetate	<0.0048	*	0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 17:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/11/16 08:15	02/17/16 17:58	1
Dibromofluoromethane	107		75 - 120	02/11/16 08:15	02/17/16 17:58	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	02/11/16 08:15	02/17/16 17:58	1
Toluene-d8 (Surr)	107		75 - 122	02/11/16 08:15	02/17/16 17:58	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	☼	02/12/16 07:17	02/22/16 21:01	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)D

Lab Sample ID: 500-107456-5

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

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	☼	02/12/16 07:17	02/22/16 21:01	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Naphthalene	0.012	J	0.039	0.0060	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Hexachlorocyclopentadiene	<0.79		0.79	0.22	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2-Methylnaphthalene	0.035	J	0.039	0.0072	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Acenaphthylene	<0.039		0.039	0.0051	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Fluorene	0.0085	J	0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Hexachlorobenzene	<0.079		0.079	0.0090	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Phenanthrene	0.27		0.039	0.0054	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Anthracene	0.038	J	0.039	0.0065	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Fluoranthene	0.62		0.039	0.0072	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Pyrene	0.84		0.039	0.0078	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Benzo[a]anthracene	0.26		0.039	0.0053	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)D

Lab Sample ID: 500-107456-5

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.34		0.039	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Bis(2-ethylhexyl) phthalate	0.10	J	0.20	0.071	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Benzo[b]fluoranthene	0.56		0.039	0.0084	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Benzo[k]fluoranthene	0.24		0.039	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Benzo[a]pyrene	0.31		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Indeno[1,2,3-cd]pyrene	0.17		0.039	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Dibenz(a,h)anthracene	0.038	J	0.039	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
Benzo[g,h,i]perylene	0.16		0.039	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 21:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	88		25 - 110	02/12/16 07:17	02/22/16 21:01	1
Phenol-d5	83		31 - 110	02/12/16 07:17	02/22/16 21:01	1
Nitrobenzene-d5	83		25 - 115	02/12/16 07:17	02/22/16 21:01	1
2-Fluorobiphenyl	95		25 - 119	02/12/16 07:17	02/22/16 21:01	1
2,4,6-Tribromophenol	71		35 - 137	02/12/16 07:17	02/22/16 21:01	1
Terphenyl-d14	183	X	36 - 134	02/12/16 07:17	02/22/16 21:01	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	0.21	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Arsenic	4.0		0.50	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Barium	35		0.50	0.092	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Beryllium	0.45		0.20	0.043	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Boron	13		2.5	0.35	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Cadmium	0.32		0.10	0.029	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Calcium	140000	B	100	32	mg/Kg	☼	02/17/16 09:04	02/21/16 01:48	10
Chromium	13	B	0.50	0.086	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Cobalt	4.8		0.25	0.057	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Copper	23		0.50	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Iron	11000	B ^	10	3.9	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Lead	110		0.25	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Magnesium	81000	B	50	20	mg/Kg	☼	02/17/16 09:04	02/21/16 01:48	10
Manganese	360	B	0.50	0.099	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Nickel	13	B	0.50	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Potassium	820		25	4.1	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Selenium	0.65		0.50	0.25	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Silver	0.097	J	0.25	0.059	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Sodium	1000	B	50	6.6	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Thallium	0.35	J	0.50	0.25	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Vanadium	15		0.25	0.073	mg/Kg	☼	02/17/16 09:04	02/20/16 01:08	1
Zinc	91		10	3.2	mg/Kg	☼	02/17/16 09:04	02/21/16 01:48	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.20	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 04:40	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 04:40	1
Boron	0.087	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 04:40	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B06 (0-1)D

Lab Sample ID: 500-107456-5

Date Collected: 02/10/16 14:25

Matrix: Solid

Date Received: 02/11/16 07:40

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		02/14/16 08:30	02/16/16 04:40	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:40	1
Cobalt	0.011	J	0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:40	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 04:40	1
Lead	0.012		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 04:40	1
Manganese	2.2		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:40	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:40	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 04:40	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 04:40	1
Zinc	0.15	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 04:40	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.0075		0.0075	0.0075	mg/L		02/16/16 08:23	02/18/16 22:29	1
Manganese	0.064		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 22:29	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		02/14/16 08:30	02/16/16 14:55	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 14:55	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 10:00	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.79		0.200	0.200	SU			02/13/16 09:45	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B05 (0-1)

Lab Sample ID: 500-107456-6

Date Collected: 02/10/16 14:35

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.021		0.021	0.0041	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Benzene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Bromodichloromethane	<0.0053		0.0053	0.00090	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Bromoform	<0.0053		0.0053	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Bromomethane	<0.0053		0.0053	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
2-Butanone (MEK)	<0.0053		0.0053	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Carbon disulfide	<0.0053		0.0053	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Carbon tetrachloride	<0.0053		0.0053	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Chlorobenzene	<0.0053		0.0053	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Chloroethane	<0.0053		0.0053	0.0022	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Chloroform	<0.0053		0.0053	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Chloromethane	<0.0053		0.0053	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
cis-1,2-Dichloroethene	<0.0053		0.0053	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
cis-1,3-Dichloropropene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Dibromochloromethane	<0.0053		0.0053	0.00061	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,1-Dichloroethane	<0.0053		0.0053	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,2-Dichloroethane	<0.0053		0.0053	0.00079	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,1-Dichloroethene	<0.0053		0.0053	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,2-Dichloropropane	<0.0053		0.0053	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,3-Dichloropropane, Total	<0.0053		0.0053	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Ethylbenzene	<0.0053		0.0053	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
2-Hexanone	<0.0053		0.0053	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Methylene Chloride	<0.0053		0.0053	0.0040	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
4-Methyl-2-pentanone (MIBK)	<0.0053		0.0053	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Methyl tert-butyl ether	<0.0053		0.0053	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Styrene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,1,2,2-Tetrachloroethane	<0.0053		0.0053	0.00085	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Tetrachloroethene	<0.0053		0.0053	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Toluene	<0.0053		0.0053	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
trans-1,2-Dichloroethene	<0.0053		0.0053	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
trans-1,3-Dichloropropene	<0.0053		0.0053	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,1,1-Trichloroethane	<0.0053		0.0053	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
1,1,2-Trichloroethane	<0.0053		0.0053	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Trichloroethene	<0.0053		0.0053	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Vinyl acetate	<0.0053 *		0.0053	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Vinyl chloride	<0.0053		0.0053	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 11:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 122	02/11/16 08:15	02/18/16 11:25	1
Dibromofluoromethane	108		75 - 120	02/11/16 08:15	02/18/16 11:25	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	02/11/16 08:15	02/18/16 11:25	1
Toluene-d8 (Surr)	112		75 - 122	02/11/16 08:15	02/18/16 11:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.092	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B05 (0-1)

Lab Sample ID: 500-107456-6

Date Collected: 02/10/16 14:35

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Naphthalene	0.23		0.041	0.0064	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2-Methylnaphthalene	0.55		0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2-Nitrophenol	<0.41		0.41	0.098	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,4-Dinitrophenol	<0.83		0.83	0.73	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Acenaphthylene	0.018 J		0.041	0.0054	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
2,4-Dinitrotoluene	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Acenaphthene	0.024 J		0.041	0.0074	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Dibenzofuran	0.19 J		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Fluorene	0.021 J		0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Hexachlorobenzene	<0.083		0.083	0.0096	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Phenanthrene	0.56		0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Anthracene	0.070		0.041	0.0069	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Fluoranthene	0.48		0.041	0.0077	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Pyrene	1.1		0.041	0.0082	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Butyl benzyl phthalate	<0.21		0.21	0.079	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Benzo[a]anthracene	0.32		0.041	0.0056	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B05 (0-1)

Lab Sample ID: 500-107456-6

Date Collected: 02/10/16 14:35

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.39		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Bis(2-ethylhexyl) phthalate	0.093	J	0.21	0.075	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Benzo[b]fluoranthene	0.56		0.041	0.0089	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Benzo[k]fluoranthene	0.20		0.041	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Benzo[a]pyrene	0.34		0.041	0.0080	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Indeno[1,2,3-cd]pyrene	0.17		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0080	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
Benzo[g,h,i]perylene	0.15		0.041	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:17	02/22/16 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	75		25 - 110	02/12/16 07:17	02/22/16 21:27	1
Phenol-d5	77		31 - 110	02/12/16 07:17	02/22/16 21:27	1
Nitrobenzene-d5	71		25 - 115	02/12/16 07:17	02/22/16 21:27	1
2-Fluorobiphenyl	77		25 - 119	02/12/16 07:17	02/22/16 21:27	1
2,4,6-Tribromophenol	99		35 - 137	02/12/16 07:17	02/22/16 21:27	1
Terphenyl-d14	175	X	36 - 134	02/12/16 07:17	02/22/16 21:27	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Arsenic	6.0		0.58	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Barium	93		0.58	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Beryllium	0.75		0.23	0.050	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Boron	18		2.9	0.41	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Cadmium	0.65		0.12	0.034	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Calcium	70000	B	120	37	mg/Kg	☼	02/17/16 09:04	02/21/16 02:18	10
Chromium	14	B	0.58	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Cobalt	8.3		0.29	0.066	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Copper	21		0.58	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Iron	18000	B ^	12	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Lead	100		0.29	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Magnesium	34000	B ^	5.8	2.4	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Manganese	570	B	0.58	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Nickel	17	B	0.58	0.16	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Potassium	1000		29	4.7	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Selenium	0.54	J	0.58	0.29	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Silver	0.077	J	0.29	0.068	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Sodium	1100	B	58	7.7	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Vanadium	21		0.29	0.085	mg/Kg	☼	02/17/16 09:04	02/20/16 01:13	1
Zinc	120		1.2	0.37	mg/Kg	☼	02/17/16 09:04	02/21/16 01:55	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.24	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:03	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:03	1
Boron	0.083	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:03	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B05 (0-1)

Lab Sample ID: 500-107456-6

Date Collected: 02/10/16 14:35

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.3

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		02/14/16 08:30	02/16/16 05:03	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:03	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:03	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:03	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:03	1
Manganese	1.2		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:03	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:03	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:03	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:03	1
Zinc	0.094	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 22:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 14:59	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 14:59	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 10:06	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.034		0.019	0.0099	mg/Kg	☼	02/16/16 16:00	02/17/16 17:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.65		0.200	0.200	SU			02/13/16 09:47	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B03 (0-1)

Lab Sample ID: 500-107456-8

Date Collected: 02/10/16 16:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.34		0.34	0.12	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Benzene	<0.017		0.017	0.0098	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Bromodichloromethane	<0.067		0.067	0.025	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Bromoform	<0.067		0.067	0.032	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Bromomethane	<0.13		0.13	0.053	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
2-Butanone (MEK)	<0.34		0.34	0.14	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Carbon disulfide	<0.13		0.13	0.054	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Carbon tetrachloride	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Chlorobenzene	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Chloroethane	<0.067		0.067	0.034	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Chloroform	<0.067		0.067	0.025	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Chloromethane	<0.067		0.067	0.021	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
cis-1,2-Dichloroethene	<0.067		0.067	0.027	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
cis-1,3-Dichloropropene	<0.067		0.067	0.028	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Dibromochloromethane	<0.067		0.067	0.033	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,1-Dichloroethane	<0.067		0.067	0.028	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,2-Dichloroethane	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,1-Dichloroethene	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,2-Dichloropropane	<0.067		0.067	0.029	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,3-Dichloropropane, Total	<0.067		0.067	0.028	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Ethylbenzene	<0.017		0.017	0.012	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
2-Hexanone	<0.34		0.34	0.10	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Methylene Chloride	<0.34		0.34	0.11	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
4-Methyl-2-pentanone (MIBK)	<0.34		0.34	0.14	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Methyl tert-butyl ether	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Styrene	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,1,2,2-Tetrachloroethane	<0.067		0.067	0.027	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Tetrachloroethene	<0.067		0.067	0.025	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Toluene	<0.017		0.017	0.0099	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
trans-1,2-Dichloroethene	<0.067		0.067	0.023	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
trans-1,3-Dichloropropene	<0.067		0.067	0.024	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,1,1-Trichloroethane	<0.067		0.067	0.026	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
1,1,2-Trichloroethane	<0.067		0.067	0.024	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Trichloroethene	<0.034		0.034	0.011	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Vinyl acetate	<0.13		0.13	0.061	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Vinyl chloride	<0.034		0.034	0.018	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50
Xylenes, Total	<0.034		0.034	0.015	mg/Kg	☼	02/10/16 16:00	02/22/16 14:11	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		75 - 120	02/10/16 16:00	02/22/16 14:11	50
Dibromofluoromethane	97		75 - 120	02/10/16 16:00	02/22/16 14:11	50
1,2-Dichloroethane-d4 (Surr)	97		75 - 125	02/10/16 16:00	02/22/16 14:11	50
Toluene-d8 (Surr)	99		75 - 120	02/10/16 16:00	02/22/16 14:11	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B03 (0-1)

Lab Sample ID: 500-107456-8

Date Collected: 02/10/16 16:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Acenaphthene	0.018	J	0.039	0.0070	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Fluorene	0.019	J	0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Phenanthrene	0.34		0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Anthracene	0.051		0.039	0.0065	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Fluoranthene	0.52		0.039	0.0073	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Pyrene	1.2		0.039	0.0078	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Benzo[a]anthracene	0.32		0.039	0.0053	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Chrysene	0.47		0.039	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B03 (0-1)

Lab Sample ID: 500-107456-8

Date Collected: 02/10/16 16:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Bis(2-ethylhexyl) phthalate	0.091	J	0.20	0.072	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Benzo[b]fluoranthene	0.70		0.039	0.0085	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Benzo[k]fluoranthene	0.25		0.039	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Benzo[a]pyrene	0.37		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Indeno[1,2,3-cd]pyrene	0.37		0.039	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Dibenz(a,h)anthracene	0.087		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
Benzo[g,h,i]perylene	0.36		0.039	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 22:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	81		25 - 110	02/12/16 07:17	02/22/16 22:19	1
Phenol-d5	60		31 - 110	02/12/16 07:17	02/22/16 22:19	1
Nitrobenzene-d5	74		25 - 115	02/12/16 07:17	02/22/16 22:19	1
2-Fluorobiphenyl	86		25 - 119	02/12/16 07:17	02/22/16 22:19	1
2,4,6-Tribromophenol	92		35 - 137	02/12/16 07:17	02/22/16 22:19	1
Terphenyl-d14	202	X	36 - 134	02/12/16 07:17	02/22/16 22:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	63		20	8.7	mg/Kg	☼	02/12/16 07:17	02/24/16 13:33	100

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Arsenic	4.8		0.60	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Barium	66		0.60	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Beryllium	0.55		0.24	0.052	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Boron	11		3.0	0.42	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Cadmium	0.093	J	0.12	0.035	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Calcium	120000	B	120	39	mg/Kg	☼	02/17/16 09:04	02/21/16 02:45	10
Chromium	16	B	0.60	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Cobalt	6.4		0.30	0.068	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Copper	14		0.60	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Iron	13000	B ^	12	4.7	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Lead	20		0.30	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Magnesium	54000	B ^	6.0	2.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Manganese	630	B	0.60	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Nickel	16	B	0.60	0.16	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Potassium	840		30	4.9	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Selenium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Silver	<0.30		0.30	0.071	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Sodium	1700	B	60	8.0	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Vanadium	21		0.30	0.088	mg/Kg	☼	02/17/16 09:04	02/20/16 01:23	1
Zinc	46		1.2	0.38	mg/Kg	☼	02/17/16 09:04	02/21/16 02:38	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B03 (0-1)

Lab Sample ID: 500-107456-8

Date Collected: 02/10/16 16:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.6

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.61		0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:17	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:17	1
Boron	0.088	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:17	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		02/14/16 08:30	02/16/16 05:17	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:17	1
Cobalt	0.017	J	0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:17	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:17	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:17	1
Manganese	6.2		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:17	1
Nickel	0.016	J	0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:17	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:17	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:17	1
Zinc	0.095	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.15		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 22:49	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		02/14/16 08:30	02/16/16 15:08	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:08	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 10:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.019	0.010	mg/Kg	☼	02/16/16 16:00	02/17/16 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.98		0.200	0.200	SU			02/13/16 09:52	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B02 (0-1)

Lab Sample ID: 500-107456-9

Date Collected: 02/10/16 16:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0034	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Benzene	<0.0044		0.0044	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Bromodichloromethane	<0.0044		0.0044	0.00075	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Bromoform	<0.0044		0.0044	0.00090	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Bromomethane	<0.0044	*	0.0044	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Carbon tetrachloride	<0.0044		0.0044	0.00095	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Chloroethane	<0.0044		0.0044	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Chloroform	<0.0044		0.0044	0.00086	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Chloromethane	<0.0044		0.0044	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00090	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Dibromochloromethane	<0.0044		0.0044	0.00051	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,1-Dichloroethane	<0.0044		0.0044	0.00091	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,2-Dichloroethane	<0.0044		0.0044	0.00066	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,2-Dichloropropane	<0.0044		0.0044	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,3-Dichloropropane, Total	<0.0044		0.0044	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Methylene Chloride	<0.0044		0.0044	0.0033	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00091	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00070	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Tetrachloroethene	<0.0044		0.0044	0.00092	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00086	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Vinyl acetate	<0.0044	*	0.0044	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Vinyl chloride	<0.0044		0.0044	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1
Xylenes, Total	<0.0089		0.0089	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 122	02/11/16 08:15	02/17/16 19:39	1
Dibromofluoromethane	105		75 - 120	02/11/16 08:15	02/17/16 19:39	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/11/16 08:15	02/17/16 19:39	1
Toluene-d8 (Surr)	108		75 - 122	02/11/16 08:15	02/17/16 19:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.089	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B02 (0-1)

Lab Sample ID: 500-107456-9

Date Collected: 02/10/16 16:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Naphthalene	0.011	J	0.040	0.0062	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,4-Dichlorophenol	<0.40		0.40	0.096	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2-Methylnaphthalene	0.020	J	0.040	0.0074	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Pentachlorophenol	<0.81		0.81	0.65	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Phenanthrene	0.077		0.040	0.0056	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Anthracene	0.014	J	0.040	0.0067	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Fluoranthene	0.13		0.040	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Pyrene	0.31		0.040	0.0080	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Butyl benzyl phthalate	<0.20		0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Benzo[a]anthracene	0.087		0.040	0.0054	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B02 (0-1)

Lab Sample ID: 500-107456-9

Date Collected: 02/10/16 16:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.13		0.040	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Bis(2-ethylhexyl) phthalate	0.11	J	0.20	0.073	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Benzo[b]fluoranthene	0.20		0.040	0.0087	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Benzo[k]fluoranthene	0.070		0.040	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Benzo[a]pyrene	0.10		0.040	0.0078	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Indeno[1,2,3-cd]pyrene	0.10		0.040	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0078	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
Benzo[g,h,i]perylene	0.11		0.040	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:17	02/22/16 22:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	82		25 - 110	02/12/16 07:17	02/22/16 22:45	1
Phenol-d5	87		31 - 110	02/12/16 07:17	02/22/16 22:45	1
Nitrobenzene-d5	76		25 - 115	02/12/16 07:17	02/22/16 22:45	1
2-Fluorobiphenyl	86		25 - 119	02/12/16 07:17	02/22/16 22:45	1
2,4,6-Tribromophenol	58		35 - 137	02/12/16 07:17	02/22/16 22:45	1
Terphenyl-d14	190	X	36 - 134	02/12/16 07:17	02/22/16 22:45	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Arsenic	6.0		0.59	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Barium	43		0.59	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Beryllium	0.39		0.24	0.051	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Boron	6.8		2.9	0.41	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Cadmium	0.049	J	0.12	0.034	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Calcium	120000	B	120	38	mg/Kg	☼	02/17/16 09:04	02/21/16 02:58	10
Chromium	14	B	0.59	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Cobalt	6.7		0.29	0.067	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Copper	19		0.59	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Iron	14000	B ^	12	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Lead	25		0.29	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Magnesium	52000	B ^	5.9	2.4	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Manganese	370	B	0.59	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Nickel	16	B	0.59	0.16	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Potassium	1000		29	4.8	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Selenium	0.65		0.59	0.29	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Silver	<0.29		0.29	0.069	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Sodium	1300	B	59	7.8	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Vanadium	19		0.29	0.086	mg/Kg	☼	02/17/16 09:04	02/20/16 01:28	1
Zinc	46		1.2	0.37	mg/Kg	☼	02/17/16 09:04	02/21/16 02:51	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.24	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:23	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:23	1
Boron	0.063	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:23	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B02 (0-1)

Lab Sample ID: 500-107456-9

Date Collected: 02/10/16 16:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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		02/14/16 08:30	02/16/16 05:23	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:23	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:23	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:23	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:23	1
Manganese	1.8		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:23	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:23	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:23	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:23	1
Zinc	0.031	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 22:56	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		02/14/16 08:30	02/16/16 15:12	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:12	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 10:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.021		0.021	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.00		0.200	0.200	SU			02/13/16 09:54	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits
E	Result exceeded calibration range.

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance 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.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

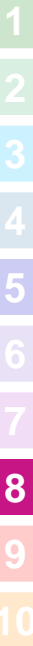
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 6
Phone: 708.534.5200 Fax: 708.534.5201



500-107456 COC

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 #: 500-107456
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: 28.3, 3.2, 4

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		1009341-000801								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 #		Voc		SVOC		Total TAC			
IL 38								Metals			
Project Location/State		Lab PM						TAC metals			
Kane County, IL		D. Wright						pH/ye Solids			
Sampler		Sample ID		Date		Time		# of Containers		Matrix	
S. Cooper											
1	MS/MSD	3011-93-B09 (01)	2-10-16	1405	2	S	X	X	X	X	
2		3011-93-B08 (01)	2-10-16	1415	2	S	X	X	X	X	
3		3011-93-B07 (01)	2-10-16	1420	2	S	X	X	X	X	
4		3011-93-B06 (01)	2-10-16	1425	2	S	X	X	X	X	
5		3011-93-B06 (01) D	2-10-16	1425	2	S	X	X	X	X	
6		3011-93-B05 (01)	2-10-16	1435	2	S	X	X	X	X	
7		3011-93-B04 (01)	2-10-16	1445	2	S	X	X	X	X	
8		3011-93-B03 (01)	2-10-16	1600	2	S	X	X	X	X	
9		3011-93-B02 (01)	2-10-16	1605	2	S	X	X	X	X	
10		3011-93-B01 (01)	2-10-16	1610	2	S	X	X	X	X	

Turnaround Time Required (Business Days)
 ___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days 10 Days ___ 15 Days ___ Other
 Requested Due Date _____

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

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	GC	2-10-16	1615	<i>[Signature]</i>	TA	2/10/16	1615
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	TA	2/10/16	1755	<i>[Signature]</i>	TA-CAT	2/11/16	0740
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments: _____
 Lab Comments: _____

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-1

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
3800 block of Lincoln Highway ISGS #3011-94 (Agricultural Land)

City: St. Charles State: IL Zip Code: 60119

County: Kane Township: Campton and St. Charles

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

Latitude: 41.902938 Longitude: -88.376161
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.902938 Longitude: -88.376161

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)]:

Locations (See Attachment A) were sampled within the construction zone adjacent to ISGS #3011-94 (Agricultural Land). Refer to PSI Report for ISGS #3011-94 (Agricultural Land) including Table 4-4, and Figures 4-13A&B and 4-14A&B.

- 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 J107456-2, J107509-11, J107456-3, and J107456-7.

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:

3/17/16

Date:



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

Attachment A

ISGS# 3011-94 (Agricultural Land)

Analytical results from the sample points collected at adjacent properties ISGS# 3011-97 and ISGS# 3011-101 were used to delineate areas of impact.

III (a)

Soil sample points:

- 3011-94-B02
- 3011-94-B04
- 3011-94-B06
- 3011-97-B01
- 3011-101-B03

III (b)

Lab packages with associated sample locations

- J107509-11**
- 3011-94-B02
- 3011-94-B04

- J107456-2**
- 3011-94-B06

- J107456-3**
- 3011-97-B01

- J107456-7**
- 3011-101-B03




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-94 (Agricultural Land)			Comparison Criteria			
	3011-94-B02	3011-94-B04	3011-94-B06	MACs			TACO
BORING	3011-94-B02 (0-1)	3011-94-B04 (0-1)	3011-94-B06 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
SAMPLE							
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1				
pH	9	8.53	8.82				
VOCs (None Detected)							
SVOCs (mg/kg)							
2-Methylnaphthalene	ND U	0.018 J	0.038 J	--	--	--	--
Acenaphthene	ND U	0.079	ND U	570	--	--	--
Anthracene	ND U	0.13	0.024 J	12,000	--	--	--
Benzo[a]anthracene	0.033 J	0.4	0.19	0.9	1.8	1.1	--
Benzo[a]pyrene	0.047	0.43 †	0.26 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.091	0.86	0.47	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.032 J	0.16	0.28	--	--	--	--
Benzo[k]fluoranthene	0.031 J	0.3	0.19	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	ND U	0.16 J	46	--	--	--
Butyl benzyl phthalate	ND U	ND U	0.11 J	930	--	--	--
Carbazole	ND U	0.1 J	ND U	0.6	--	--	--
Chrysene	0.05	0.48	0.3	88	--	--	--
Fluoranthene	0.083	1.1	0.32	3,100	--	--	--
Fluorene	ND U	0.069	0.01 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.028 J	0.19	0.25	0.9	1.6	0.9	--
Naphthalene	ND U	0.037 J	0.019 J	1.8	--	--	--
Phenanthrene	0.028 J	0.72	0.2	--	--	--	--
Pyrene	0.066 J	1	0.68	2,300	--	--	--
Inorganics (mg/kg)							
Arsenic	4.8	3.3	2.6	11.3	13	--	--
Barium	52	27	25	1,500	--	--	--
Beryllium	0.44	0.28	0.25	22	--	--	--
Boron	5.3	9.8	13	40	--	--	--
Cadmium	0.34	0.21	0.2	5.2	--	--	--
Calcium	54,000	140,000	200,000	--	--	--	--
Chromium	21	16	12	21	--	--	--
Cobalt	7	4.4	3.3	20	--	--	--
Copper	14	16	17	2,900	--	--	--
Iron	12,000	9,400	9,300	15,000	15,900	--	--
Lead	170 †	120 †	29	107	--	--	--
Magnesium	24,000	80,000	120,000	325,000	--	--	--
Manganese	450	290	350	630	636	--	--
Mercury	0.028	0.011 J	ND U	0.89	--	--	--
Nickel	14	9.3	9.2	100	--	--	--
Potassium	920	750	650	--	--	--	--
Silver	0.18 J	ND U	ND U	4.4	--	--	--
Sodium	1,800	1,100	1,000	--	--	--	--
Vanadium	18	10	11	550	--	--	--
Zinc	89	75	82	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	0.3 J	0.34 J	0.21 J	--	--	--	2
Boron	0.097 J	0.52	0.058 J	--	--	--	2
Lead	ND U	ND U	ND U	--	--	--	0.0075
Manganese	1.2 L	1 L	0.58 L	--	--	--	0.15
Zinc	ND U	0.41 J	ND U	--	--	--	5
SPLP Metals (mg/L)							
Manganese	0.17 L	0.29 L	ND U	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-97 (Vacant Lot)	Comparison Criteria			
BORING	3011-97-B01	MACs			TACO
SAMPLE	3011-97-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.88				
VOCs (None Detected)					
SVOCs (mg/kg)					
Benzo[a]anthracene	0.027 J	0.9	1.8	1.1	--
Benzo[b]fluoranthene	0.049	0.9	2.1	1.5	--
Chrysene	0.04 J	88	--	--	--
Fluoranthene	0.043	3,100	--	--	--
Phenanthrene	0.029 J	--	--	--	--
Pyrene	0.095	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	7.8	11.3	13	--	--
Barium	99	1,500	--	--	--
Beryllium	0.72	22	--	--	--
Boron	2.8	40	--	--	--
Cadmium	0.092 J	5.2	--	--	--
Calcium	12,000	--	--	--	--
Chromium	20	21	--	--	--
Cobalt	12	20	--	--	--
Copper	17	2,900	--	--	--
Iron	20,000 †m	15,000	15,900	--	--
Lead	85	107	--	--	--
Magnesium	8,000	325,000	--	--	--
Manganese	810 †m	630	636	--	--
Mercury	0.038	0.89	--	--	--
Nickel	22	100	--	--	--
Potassium	960	--	--	--	--
Sodium	1,400	--	--	--	--
Thallium	0.52 J	2.6	--	--	--
Vanadium	33	550	--	--	--
Zinc	66	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.47 J	--	--	--	2
Boron	0.066 J	--	--	--	2
Iron	ND U	--	--	--	5
Manganese	0.86 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.011 J	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-101 (St. Charles Complex)	Comparison Criteria			
BORING	3011-101-B04	MACs			TACO
SAMPLE	3011-101-B04 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.97				
VOCs (None Detected)					
SVOCs (mg/kg)					
2-Methylnaphthalene	ND U	--	--	--	--
Acenaphthene	0.011 J	570	--	--	--
Acenaphthylene	0.0055 J	--	--	--	--
Anthracene	0.047	12,000	--	--	--
Benzo[a]anthracene	0.23	0.9	1.8	1.1	--
Benzo[a]pyrene	0.33 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.54	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.35	--	--	--	--
Benzo[k]fluoranthene	0.26	9	--	--	--
Bis(2-ethylhexyl) phthalate	0.13 J	46	--	--	--
Chrysene	0.36	88	--	--	--
Dibenzo(a,h)anthracene	0.1 †	0.09	0.42	0.2	--
Fluoranthene	0.37	3,100	--	--	--
Fluorene	0.012 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.3	0.9	1.6	0.9	--
Naphthalene	ND U	1.8	--	--	--
Phenanthrene	0.27	--	--	--	--
Pyrene	1.1	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	3.7	11.3	13	--	--
Barium	42	1,500	--	--	--
Beryllium	0.3	22	--	--	--
Boron	7.9	40	--	--	--
Cadmium	0.25	5.2	--	--	--
Calcium	110,000	--	--	--	--
Chromium	12	21	--	--	--
Cobalt	5.3	20	--	--	--
Copper	17	2,900	--	--	--
Iron	9,200	15,000	15,900	--	--
Lead	62	107	--	--	--
Magnesium	68,000	325,000	--	--	--
Manganese	390	630	636	--	--
Mercury	0.019 J	0.89	--	--	--
Nickel	12	100	--	--	--
Potassium	720	--	--	--	--
Selenium	0.22 J	1.3	--	--	--
Silver	0.053 J	4.4	--	--	--
Sodium	1,000	--	--	--	--
Thallium	0.29 J	2.6	--	--	--
Vanadium	12	550	--	--	--
Zinc	86	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.23 J	--	--	--	2
Boron	0.066 J	--	--	--	2
Iron	ND U	--	--	--	5
Manganese	0.95 L	--	--	--	0.15
Nickel	ND U	--	--	--	0.1
SPLP Metals (mg/L)					
Manganese	0.017 J	--	--	--	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: 500-107456-2
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/25/2016 3:52:09 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Job ID: 500-107456-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-2

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 3011-94-B06 (0-1) (500-107456-11).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was 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 samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-94-B06 (0-1) (500-107456-11), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-94-B06 (0-1) (500-107456-11) and (500-107456-E-1-L). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

Method(s) 6010B: The following samples were diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-94-B06 (0-1) (500-107456-11). Elevated reporting limits (RLs) are provided.

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

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Client Sample ID: 3011-94-B06 (0-1)

Lab Sample ID: 500-107456-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.019	J	0.041	0.0063	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.038	J	0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.010	J	0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.20		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.024	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.32		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.68		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Butyl benzyl phthalate	0.11	J	0.21	0.078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.19		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.30		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.16	J	0.21	0.075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.47		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.19		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.26		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.25		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.28		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.6		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	25		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.25		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	13		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	200000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	12	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.3		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	9300	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	29		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	120000	B	55	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	350	B	0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.2	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	650		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000	B	55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	82		11	3.5	mg/Kg	10	☼	6010B	Total/NA
Barium	0.21	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.058	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.58		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.083	J B	0.50	0.020	mg/L	1		6010B	TCLP
pH	8.82		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-11	3011-94-B06 (0-1)	Solid	02/10/16 15:05	02/11/16 07:40

1

2

3

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Client Sample ID: 3011-94-B06 (0-1)

Lab Sample ID: 500-107456-11

Date Collected: 02/10/16 15:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0038	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Benzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Bromodichloromethane	<0.0049		0.0049	0.00084	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Bromoform	<0.0049		0.0049	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Bromomethane	<0.0049		0.0049	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
2-Butanone (MEK)	<0.0049		0.0049	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Carbon disulfide	<0.0049		0.0049	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Carbon tetrachloride	<0.0049		0.0049	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Chlorobenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Chloroethane	<0.0049		0.0049	0.0021	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Chloroform	<0.0049		0.0049	0.00096	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Chloromethane	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
cis-1,2-Dichloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
cis-1,3-Dichloropropene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Dibromochloromethane	<0.0049		0.0049	0.00057	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,1-Dichloroethane	<0.0049		0.0049	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,2-Dichloroethane	<0.0049		0.0049	0.00073	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,1-Dichloroethene	<0.0049		0.0049	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,2-Dichloropropane	<0.0049		0.0049	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,3-Dichloropropane, Total	<0.0049		0.0049	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Ethylbenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Methylene Chloride	<0.0049		0.0049	0.0037	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Methyl tert-butyl ether	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Styrene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,1,2,2-Tetrachloroethane	<0.0049		0.0049	0.00079	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Tetrachloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Toluene	<0.0049		0.0049	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
trans-1,2-Dichloroethene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
trans-1,3-Dichloropropene	<0.0049		0.0049	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,1,1-Trichloroethane	<0.0049		0.0049	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
1,1,2-Trichloroethane	<0.0049		0.0049	0.00096	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Trichloroethene	<0.0049		0.0049	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Vinyl acetate	<0.0049	*	0.0049	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Vinyl chloride	<0.0049		0.0049	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1
Xylenes, Total	<0.0099		0.0099	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 12:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/18/16 12:15	1
Dibromofluoromethane	103		75 - 120	02/11/16 08:15	02/18/16 12:15	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 134	02/11/16 08:15	02/18/16 12:15	1
Toluene-d8 (Surr)	109		75 - 122	02/11/16 08:15	02/18/16 12:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Client Sample ID: 3011-94-B06 (0-1)

Lab Sample ID: 500-107456-11

Date Collected: 02/10/16 15:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Naphthalene	0.019	J	0.041	0.0063	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2-Methylnaphthalene	0.038	J	0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Fluorene	0.010	J	0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Phenanthrene	0.20		0.041	0.0057	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Anthracene	0.024	J	0.041	0.0069	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Fluoranthene	0.32		0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Pyrene	0.68		0.041	0.0082	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Butyl benzyl phthalate	0.11	J	0.21	0.078	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Benzo[a]anthracene	0.19		0.041	0.0055	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Client Sample ID: 3011-94-B06 (0-1)

Lab Sample ID: 500-107456-11

Date Collected: 02/10/16 15:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.30		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Bis(2-ethylhexyl) phthalate	0.16	J	0.21	0.075	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Benzo[b]fluoranthene	0.47		0.041	0.0089	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Benzo[k]fluoranthene	0.19		0.041	0.012	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Benzo[a]pyrene	0.26		0.041	0.0080	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Indeno[1,2,3-cd]pyrene	0.25		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0079	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
Benzo[g,h,i]perylene	0.28		0.041	0.013	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:17	02/24/16 00:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	78		25 - 110	02/12/16 07:17	02/24/16 00:45	1
Phenol-d5	83		31 - 110	02/12/16 07:17	02/24/16 00:45	1
Nitrobenzene-d5	76		25 - 115	02/12/16 07:17	02/24/16 00:45	1
2-Fluorobiphenyl	90		25 - 119	02/12/16 07:17	02/24/16 00:45	1
2,4,6-Tribromophenol	55		35 - 137	02/12/16 07:17	02/24/16 00:45	1
Terphenyl-d14	190	X	36 - 134	02/12/16 07:17	02/24/16 00:45	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Arsenic	2.6		0.55	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Barium	25		0.55	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Beryllium	0.25		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Boron	13		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Cadmium	0.20		0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Calcium	200000	B	110	36	mg/Kg	☼	02/17/16 09:04	02/21/16 03:41	10
Chromium	12	B	0.55	0.095	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Cobalt	3.3		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Copper	17		0.55	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Iron	9300	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Lead	29		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Magnesium	120000	B	55	22	mg/Kg	☼	02/17/16 09:04	02/21/16 03:41	10
Manganese	350	B	0.55	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Nickel	9.2	B	0.55	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Potassium	650		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Sodium	1000	B	55	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Vanadium	11		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 01:39	1
Zinc	82		11	3.5	mg/Kg	☼	02/17/16 09:04	02/21/16 03:41	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.21	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:37	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:37	1
Boron	0.058	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:37	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Client Sample ID: 3011-94-B06 (0-1)

Lab Sample ID: 500-107456-11

Date Collected: 02/10/16 15:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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		02/14/16 08:30	02/16/16 05:37	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:37	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:37	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:37	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:37	1
Manganese	0.58		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:37	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:37	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:37	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:37	1
Zinc	0.083	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 23:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 15:20	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:20	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		02/15/16 13:50	02/16/16 10:16	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.021		0.021	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.82		0.200	0.200	SU			02/13/16 09:58	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

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

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-2

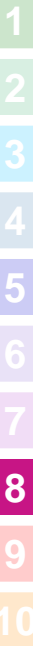
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107456
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter										Preservative Key	
EE		1009341-0008-01														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 IL 38		Lab Project #															
Project Location/State Kane County, IL		Lab PM D. Wright															
Sampler S-Cooper																	
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix											Comments
			Date	Time													
11		3011-94-306 (01)	2/10/16	1505	2	J	VOC	SUOC	TOTAL TAC	TOTAL TAC	TOTAL TAC	TOTAL TAC	TOTAL TAC	TOTAL TAC	TOTAL TAC	TOTAL TAC	

Turnaround Time Required (Business Days)

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

Sample Disposal

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

Relinquished By <i>[Signature]</i>	Company EE	Date 2-10-16	Time 16:15	Received By <i>[Signature]</i>	Company TA	Date 2/10/16	Time 16:00
Relinquished By <i>[Signature]</i>	Company TA	Date 2/10/16	Time 17:55	Received By <i>[Signature]</i>	Company TA-CPT	Date 2/11/16	Time 07:00
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: 710
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: 500-107456-2

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107456-3
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/25/2016 3:52:28 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
TotalAccess

Have a Question?



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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Job ID: 500-107456-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-3

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-97-B01 (0-1) (500-107456-12), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-97-B01 (0-1) (500-107456-12) and (500-107456-E-1-L). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.029	J	0.042	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.043		0.042	0.0078	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.095		0.042	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.027	J	0.042	0.0057	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.040	J	0.042	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.049		0.042	0.0091	mg/Kg	1	☼	8270D	Total/NA
Arsenic	7.8		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	99		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.72		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	2.8		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.092	J	0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	12000	B ^	11	3.6	mg/Kg	1	☼	6010B	Total/NA
Chromium	20	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	12		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	20000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	85		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	8000	B ^	5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	810	B	0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	22	B	0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	960		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	1400	B	56	7.3	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.52	J	0.56	0.27	mg/Kg	1	☼	6010B	Total/NA
Vanadium	33		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	66		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.47	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.066	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.86		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.034	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.011	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.038		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.88		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-12	3011-97-B01 (0-1)	Solid	02/10/16 15:00	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Benzene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Bromodichloromethane	<0.0050		0.0050	0.00085	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Bromoform	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Bromomethane	<0.0050	*	0.0050	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
2-Butanone (MEK)	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Carbon disulfide	<0.0050		0.0050	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Carbon tetrachloride	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chlorobenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chloroethane	<0.0050		0.0050	0.0021	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chloroform	<0.0050		0.0050	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chloromethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
cis-1,2-Dichloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
cis-1,3-Dichloropropene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Dibromochloromethane	<0.0050		0.0050	0.00058	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1-Dichloroethane	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,2-Dichloroethane	<0.0050		0.0050	0.00075	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1-Dichloroethene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,2-Dichloropropane	<0.0050		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,3-Dichloropropane, Total	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Ethylbenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Methylene Chloride	<0.0050		0.0050	0.0038	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Methyl tert-butyl ether	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Styrene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1,2,2-Tetrachloroethane	<0.0050		0.0050	0.00080	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Tetrachloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Toluene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
trans-1,2-Dichloroethene	<0.0050		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
trans-1,3-Dichloropropene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1,1-Trichloroethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1,2-Trichloroethane	<0.0050		0.0050	0.00097	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Trichloroethene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Vinyl acetate	<0.0050	*	0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Vinyl chloride	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/17/16 20:54	1
Dibromofluoromethane	105		75 - 120	02/11/16 08:15	02/17/16 20:54	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 134	02/11/16 08:15	02/17/16 20:54	1
Toluene-d8 (Surr)	107		75 - 122	02/11/16 08:15	02/17/16 20:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.094	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
1,3-Dichlorobenzene	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.051	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
N-Nitrosodi-n-propylamine	<0.085		0.085	0.052	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachloroethane	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Chlorophenol	<0.21		0.21	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Nitrobenzene	<0.042		0.042	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dimethylphenol	<0.42		0.42	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Naphthalene	<0.042		0.042	0.0065	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dichlorophenol	<0.42		0.42	0.10	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Chloroaniline	<0.85		0.85	0.20	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4,6-Trichlorophenol	<0.42		0.42	0.15	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4,5-Trichlorophenol	<0.42		0.42	0.096	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachlorocyclopentadiene	<0.85		0.85	0.24	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Methylnaphthalene	<0.042		0.042	0.0078	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Nitroaniline	<0.21		0.21	0.057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Chloronaphthalene	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Chloro-3-methylphenol	<0.42		0.42	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,6-Dinitrotoluene	<0.21		0.21	0.083	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Nitrophenol	<0.42		0.42	0.10	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
3-Nitroaniline	<0.42		0.42	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dinitrophenol	<0.85		0.85	0.74	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Acenaphthylene	<0.042		0.042	0.0056	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dinitrotoluene	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Acenaphthene	<0.042		0.042	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Dibenzofuran	<0.21		0.21	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Nitrophenol	<0.85		0.85	0.40	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Fluorene	<0.042		0.042	0.0059	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Nitroaniline	<0.42		0.42	0.18	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.056	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachlorobenzene	<0.085		0.085	0.0098	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Diethyl phthalate	<0.21		0.21	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Pentachlorophenol	<0.85		0.85	0.68	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
N-Nitrosodiphenylamine	<0.21		0.21	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4,6-Dinitro-2-methylphenol	<0.85		0.85	0.34	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Phenanthrene	0.029	J	0.042	0.0059	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Anthracene	<0.042		0.042	0.0071	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Carbazole	<0.21		0.21	0.11	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Fluoranthene	0.043		0.042	0.0078	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Pyrene	0.095		0.042	0.0084	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Butyl benzyl phthalate	<0.21		0.21	0.080	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[a]anthracene	0.027	J	0.042	0.0057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.040	J	0.042	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.059	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.077	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Di-n-octyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[b]fluoranthene	0.049		0.042	0.0091	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[k]fluoranthene	<0.042		0.042	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[a]pyrene	<0.042		0.042	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Indeno[1,2,3-cd]pyrene	<0.042		0.042	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Dibenz(a,h)anthracene	<0.042		0.042	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[g,h,i]perylene	<0.042		0.042	0.014	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
3 & 4 Methylphenol	<0.21		0.21	0.071	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		25 - 110	02/12/16 07:17	02/23/16 00:03	1
Phenol-d5	75		31 - 110	02/12/16 07:17	02/23/16 00:03	1
Nitrobenzene-d5	75		25 - 115	02/12/16 07:17	02/23/16 00:03	1
2-Fluorobiphenyl	84		25 - 119	02/12/16 07:17	02/23/16 00:03	1
2,4,6-Tribromophenol	51		35 - 137	02/12/16 07:17	02/23/16 00:03	1
Terphenyl-d14	196	X	36 - 134	02/12/16 07:17	02/23/16 00:03	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Arsenic	7.8		0.56	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Barium	99		0.56	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Beryllium	0.72		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Boron	2.8		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Cadmium	0.092	J	0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Calcium	12000	B ^	11	3.6	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Chromium	20	B	0.56	0.096	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Cobalt	12		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Copper	17		0.56	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Iron	20000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Lead	85		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Magnesium	8000	B ^	5.6	2.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Manganese	810	B	0.56	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Nickel	22	B	0.56	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Potassium	960		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Sodium	1400	B	56	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Thallium	0.52	J	0.56	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Vanadium	33		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Zinc	66		1.1	0.35	mg/Kg	☼	02/17/16 09:04	02/21/16 03:48	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.47	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:44	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:44	1
Boron	0.066	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:44	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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		02/14/16 08:30	02/16/16 05:44	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:44	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:44	1
Manganese	0.86		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:44	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Zinc	0.034	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.011	J	0.025	0.010	mg/L		02/16/16 08:23	02/18/16 23:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 15:24	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:24	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		02/15/16 13:50	02/16/16 10:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.038		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.88		0.200	0.200	SU			02/13/16 10:01	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

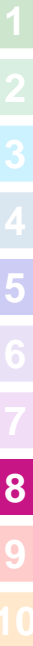
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107456
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
EE		1009341-0008-01								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 FC3E		Lab Project #										
Project Location/State Kane County, IL		Lab PM J. Cooper										
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOC	SVEC	TOTAL PAH	TEMP/SMP	PAH	Other
12		3011-97 Bol (6-1)	2-10-16	1500	2	S	X	X	X	X	X	
3011-97 Bol (6-2)												

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 EE	Company EE	Date 2/10/16	Time 1615	Received By P. Neal	Company EA	Date 2/10/16	Time 1615
Relinquished By P. Neal	Company EA	Date 2/10/16	Time 1755	Received By M. Smith	Company EA-CHT	Date 2/11/16	Time 0740

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-3

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107456-7
Client Project/Site: IDOT - IL 38 - WO 008

For:
Ecology and Environment, Inc.
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Attn: Mr. Dean Tiebout

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Job ID: 500-107456-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-7

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-101-B02 (0-1) (500-107456-19), 3011-101-B01 (0-1) (500-107456-20) and 3011-101-B04 (0-1) (500-107456-21).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323512: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-101-B03 (0-1) (500-107456-18), 3011-101-B02 (0-1) (500-107456-19), 3011-101-B01 (0-1) (500-107456-20), 3011-101-B04 (0-1) (500-107456-21), 3011-101-B05 (0-1) (500-107456-22), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-101-B03 (0-1) (500-107456-18), 3011-101-B02 (0-1) (500-107456-19), 3011-101-B01 (0-1) (500-107456-20) and (500-107456-E-1-L). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

Method(s) 6010B: The following samples were diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-101-B03 (0-1) (500-107456-18). Elevated reporting limits (RLs) are provided.

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Job ID: 500-107456-7 (Continued)

Laboratory: TestAmerica Chicago (Continued)

Method(s) 6010B: The method blank for preparation batch 500-323176 and analytical batch 500-323879 contained Chromium above the reporting limit (RL). Associated samples 3011-101-B04 (0-1) (500-107456-21) and 3011-101-B05 (0-1) (500-107456-22) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

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Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.011	J	0.039	0.0060	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.022	J	0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.0056	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.013	J	0.039	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.015	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.26		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.044		0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.37		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.82		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.22		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.29		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.11	J	0.20	0.072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.49		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.19		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	0.18		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.17		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.4		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	40		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.42		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	11		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.27		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	14	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.0		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	12000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	59		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	88000	B	55	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	440	B	0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	12	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	910		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Silver	0.080	J	0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000	B	55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	100		11	3.5	mg/Kg	10	☼	6010B	Total/NA
Barium	0.23	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.071	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.53		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.087	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.21		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.54		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-18	3011-101-B03 (0-1)	Solid	02/10/16 15:10	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Bromodichloromethane	<0.0048		0.0048	0.00081	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Bromoform	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Bromomethane	<0.0048	*	0.0048	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chloromethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1-Dichloroethane	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Vinyl acetate	<0.0048	*	0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Xylenes, Total	<0.0096		0.0096	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/17/16 23:24	1
Dibromofluoromethane	105		75 - 120	02/11/16 08:15	02/17/16 23:24	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 134	02/11/16 08:15	02/17/16 23:24	1
Toluene-d8 (Surr)	110		75 - 122	02/11/16 08:15	02/17/16 23:24	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	☼	02/12/16 07:17	02/23/16 02:38	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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	☼	02/12/16 07:17	02/23/16 02:38	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Naphthalene	0.011	J	0.039	0.0060	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Methylnaphthalene	0.022	J	0.039	0.0072	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Acenaphthylene	0.0056	J	0.039	0.0052	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Acenaphthene	0.013	J	0.039	0.0070	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Fluorene	0.015	J	0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Phenanthrene	0.26		0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Anthracene	0.044		0.039	0.0065	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Fluoranthene	0.37		0.039	0.0073	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Pyrene	0.82		0.039	0.0078	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[a]anthracene	0.22		0.039	0.0053	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.29		0.039	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Bis(2-ethylhexyl) phthalate	0.11	J	0.20	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[b]fluoranthene	0.49		0.039	0.0084	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[k]fluoranthene	0.19		0.039	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[a]pyrene	0.26		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Indeno[1,2,3-cd]pyrene	0.18		0.039	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[g,h,i]perylene	0.17		0.039	0.013	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	90		25 - 110	02/12/16 07:17	02/23/16 02:38	1
Phenol-d5	92		31 - 110	02/12/16 07:17	02/23/16 02:38	1
Nitrobenzene-d5	85		25 - 115	02/12/16 07:17	02/23/16 02:38	1
2-Fluorobiphenyl	94		25 - 119	02/12/16 07:17	02/23/16 02:38	1
2,4,6-Tribromophenol	102		35 - 137	02/12/16 07:17	02/23/16 02:38	1
Terphenyl-d14	225	X	36 - 134	02/12/16 07:17	02/23/16 02:38	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Arsenic	3.4		0.55	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Barium	40		0.55	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Beryllium	0.42		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Boron	11		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Cadmium	0.27		0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Calcium	150000	B	110	36	mg/Kg	☼	02/17/16 09:04	02/21/16 05:25	10
Chromium	14	B	0.55	0.095	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Cobalt	5.0		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Copper	17		0.55	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Iron	12000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Lead	59		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Magnesium	88000	B	55	23	mg/Kg	☼	02/17/16 09:04	02/21/16 05:25	10
Manganese	440	B	0.55	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Nickel	12	B	0.55	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Potassium	910		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Silver	0.080	J	0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Sodium	1000	B	55	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Vanadium	16		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Zinc	100		11	3.5	mg/Kg	☼	02/17/16 09:04	02/21/16 05:25	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.23	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 22:13	1
Boron	0.071	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:13	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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		02/14/16 08:30	02/16/16 22:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 22:13	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 22:13	1
Manganese	0.53		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 22:13	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Zinc	0.087	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 22:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.21		0.025	0.010	mg/L		02/16/16 08:23	02/19/16 00:13	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		02/14/16 08:30	02/16/16 16:01	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 16:01	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		02/15/16 13:50	02/16/16 10:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 18:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.54		0.200	0.200	SU			02/13/16 10:17	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107456
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		1009341.000E.01								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Date		Time		# of Containers		Matrix	
FC38				2-10-16		1570		2		S	
Project Location/State		Lab RM		Date		Time		# of Containers		Matrix	
Kane County, IL		D. Wright		2-10-16		1520		2		S	
Sampler		Lab RM		Date		Time		# of Containers		Matrix	
S. Cooper				2-10-16		1525		2		S	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Voc	Svoc	Total TAC metals	Total Spgr TAC metals	PTX / % Silica
18		3011-101-B03(0-1)	2-10-16	1570	2	S	X	X	X	X	X
19		3011-101-B02(0-1)	2-10-16	1520	2	S	X	X	X	X	X
20		3011-101-B01(0-1)	2-10-16	1525	2	S	X	X	X	X	X
21		3011-101-B04(0-1)	2-10-16	1530	2	S	X	X	X	X	X
22		3011-101-B05(0-1)	2-10-16	1535	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	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	EE	2-10-16	1615	<i>[Signature]</i>	TA	2/10/16	1615
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	TA	2/10/16	1755	<i>[Signature]</i>	TA-CHEM	2/11/16	0740

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-7

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107509-11
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/27/2016 11:54:37 AM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Job ID: 500-107509-11

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107509-11

Comments

No additional comments.

Receipt

The samples were received on 2/12/2016 7:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.4° C, 2.7° C, 3.1° C, 3.3° C and 3.8° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323423: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323512: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-94-B01 (0-1) (500-107509-40), 3011-94-B02 (0-1) (500-107509-41), (500-107509-E-41-B MS) and (500-107509-E-41-C MS). The laboratory's SOP allows one acid and one base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

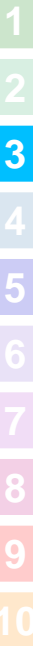
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

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Client Sample ID: 3011-94-B02 (0-1)

Lab Sample ID: 500-107509-41

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Phenanthrene	0.028	J	0.038	0.0053	mg/Kg	1	✳	✳	8270D	Total/NA
Fluoranthene	0.083		0.038	0.0070	mg/Kg	1	✳	✳	8270D	Total/NA
Pyrene	0.066	F1	0.038	0.0075	mg/Kg	1	✳	✳	8270D	Total/NA
Benzo[a]anthracene	0.033	J	0.038	0.0051	mg/Kg	1	✳	✳	8270D	Total/NA
Chrysene	0.050		0.038	0.010	mg/Kg	1	✳	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.091		0.038	0.0082	mg/Kg	1	✳	✳	8270D	Total/NA
Benzo[k]fluoranthene	0.031	J	0.038	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B02 (0-1) (Continued)

Lab Sample ID: 500-107509-41

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.047		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.028	J F1	0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.032	J F1	0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.8		0.59	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	52		0.59	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.44		0.23	0.051	mg/Kg	1	☼	6010B	Total/NA
Boron	5.3		2.9	0.41	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.34		0.12	0.034	mg/Kg	1	☼	6010B	Total/NA
Calcium	54000		120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	21		0.59	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.0		0.29	0.066	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.59	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	12000		12	4.5	mg/Kg	1	☼	6010B	Total/NA
Lead	170		0.29	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000		5.9	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	450		0.59	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.59	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	920		29	4.8	mg/Kg	1	☼	6010B	Total/NA
Silver	0.18	J	0.29	0.069	mg/Kg	1	☼	6010B	Total/NA
Sodium	1800		59	7.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.29	0.086	mg/Kg	1	☼	6010B	Total/NA
Zinc	89		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.30	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.097	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.19	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.17		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.028		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	9.00		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11



Client Sample ID: 3011-94-B04 (0-1)

Lab Sample ID: 500-107509-43

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Naphthalene	0.037	J	0.040	0.0063	mg/Kg	1	☼	8270D	Total/NA	
2-Methylnaphthalene	0.018	J	0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA	
Acenaphthene	0.079		0.040	0.0073	mg/Kg	1	☼	8270D	Total/NA	
Fluorene	0.069		0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA	
Phenanthrene	0.72		0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA	
Anthracene	0.13		0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA	
Carbazole	0.10	J	0.20	0.10	mg/Kg	1	☼	8270D	Total/NA	
Fluoranthene	1.1		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA	
Pyrene	1.0		0.040	0.0081	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]anthracene	0.40		0.040	0.0055	mg/Kg	1	☼	8270D	Total/NA	
Chrysene	0.48		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA	
Benzo[b]fluoranthene	0.86		0.040	0.0088	mg/Kg	1	☼	8270D	Total/NA	
Benzo[k]fluoranthene	0.30		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene	0.43		0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.19		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA	
Benzo[g,h,i]perylene	0.16		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA	
Arsenic	3.3		0.57	0.27	mg/Kg	1	☼	6010B	Total/NA	
Barium	27		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.28		0.23	0.050	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B04 (0-1) (Continued)

Lab Sample ID: 500-107509-43

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	9.8		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.21		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000		110	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	16		0.57	0.099	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.4		0.29	0.065	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	9400		11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	120		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	80000		57	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	290		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.3		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	750		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		57	7.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.29	0.084	mg/Kg	1	☼	6010B	Total/NA
Zinc	75		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.34	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.52		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.41	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.29		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.011	J	0.019	0.0098	mg/Kg	1	☼	7471B	Total/NA
pH	8.53		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107509-41	3011-94-B02 (0-1)	Solid	02/11/16 13:45	02/12/16 07:55
500-107509-43	3011-94-B04 (0-1)	Solid	02/11/16 14:00	02/12/16 07:55

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B02 (0-1)

Lab Sample ID: 500-107509-41

Date Collected: 02/11/16 13:45

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0036	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Bromodichloromethane	<0.0046		0.0046	0.00077	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Bromomethane	<0.0046	*	0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Chloroform	<0.0046		0.0046	0.00090	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,1-Dichloroethane	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,3-Dichloropropane, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Tetrachloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 01:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/12/16 09:20	02/19/16 01:22	1
Dibromofluoromethane	106		75 - 120	02/12/16 09:20	02/19/16 01:22	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 134	02/12/16 09:20	02/19/16 01:22	1
Toluene-d8 (Surr)	109		75 - 122	02/12/16 09:20	02/19/16 01:22	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	☼	02/17/16 17:08	02/24/16 19:57	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
1,3-Dichlorobenzene	<0.19	F1	0.19	0.043	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B02 (0-1)

Lab Sample ID: 500-107509-41

Date Collected: 02/11/16 13:45

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.1

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	☼	02/17/16 17:08	02/24/16 19:57	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.046	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Hexachloroethane	<0.19	F1	0.19	0.058	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Hexachlorocyclopentadiene	<0.77	F1	0.77	0.22	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,6-Dinitrotoluene	<0.19	F1	0.19	0.075	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2-Nitrophenol	<0.38	F1	0.38	0.090	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,4-Dinitrophenol	<0.77	F1	0.77	0.67	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
2,4-Dinitrotoluene	<0.19	F1	0.19	0.060	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Fluorene	<0.038		0.038	0.0053	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Pentachlorophenol	<0.77	F1	0.77	0.61	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
4,6-Dinitro-2-methylphenol	<0.77	F1	0.77	0.30	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Phenanthrene	0.028	J	0.038	0.0053	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Anthracene	<0.038		0.038	0.0063	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Fluoranthene	0.083		0.038	0.0070	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Pyrene	0.066	F1	0.038	0.0075	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Butyl benzyl phthalate	<0.19	F1	0.19	0.072	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Benzo[a]anthracene	0.033	J	0.038	0.0051	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B02 (0-1)

Lab Sample ID: 500-107509-41

Date Collected: 02/11/16 13:45

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.050		0.038	0.010	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
3,3'-Dichlorobenzidine	<0.19	F1	0.19	0.053	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Bis(2-ethylhexyl) phthalate	<0.19	F1	0.19	0.069	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Di-n-octyl phthalate	<0.19	F1	0.19	0.062	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Benzo[b]fluoranthene	0.091		0.038	0.0082	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Benzo[k]fluoranthene	0.031	J	0.038	0.011	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Benzo[a]pyrene	0.047		0.038	0.0073	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Indeno[1,2,3-cd]pyrene	0.028	J F1	0.038	0.0098	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Dibenz(a,h)anthracene	<0.038	F1	0.038	0.0073	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
Benzo[g,h,i]perylene	0.032	J F1	0.038	0.012	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/17/16 17:08	02/24/16 19:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	71		25 - 110	02/17/16 17:08	02/24/16 19:57	1
Phenol-d5	70		31 - 110	02/17/16 17:08	02/24/16 19:57	1
Nitrobenzene-d5	59		25 - 115	02/17/16 17:08	02/24/16 19:57	1
2-Fluorobiphenyl	69		25 - 119	02/17/16 17:08	02/24/16 19:57	1
2,4,6-Tribromophenol	60		35 - 137	02/17/16 17:08	02/24/16 19:57	1
Terphenyl-d14	74		36 - 134	02/17/16 17:08	02/24/16 19:57	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Arsenic	4.8		0.59	0.27	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Barium	52		0.59	0.11	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Beryllium	0.44		0.23	0.051	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Boron	5.3		2.9	0.41	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Cadmium	0.34		0.12	0.034	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Calcium	54000		120	38	mg/Kg	☼	02/18/16 10:17	02/23/16 02:46	10
Chromium	21		0.59	0.10	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Cobalt	7.0		0.29	0.066	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Copper	14		0.59	0.13	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Iron	12000		12	4.5	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Lead	170		0.29	0.15	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Magnesium	24000		5.9	2.4	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Manganese	450		0.59	0.12	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Nickel	14		0.59	0.16	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Potassium	920		29	4.8	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Selenium	<0.59		0.59	0.29	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Silver	0.18	J	0.29	0.069	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Sodium	1800		59	7.7	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Vanadium	18		0.29	0.086	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1
Zinc	89		1.2	0.37	mg/Kg	☼	02/18/16 10:17	02/21/16 00:39	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.30	J	0.50	0.050	mg/L		02/17/16 14:51	02/18/16 21:19	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/17/16 14:51	02/18/16 21:19	1
Boron	0.097	J	0.50	0.050	mg/L		02/17/16 14:51	02/18/16 21:19	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B02 (0-1)

Lab Sample ID: 500-107509-41

Date Collected: 02/11/16 13:45

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 83.1

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		02/17/16 14:51	02/18/16 21:19	1
Chromium	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:19	1
Cobalt	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:19	1
Iron	<0.40		0.40	0.20	mg/L		02/17/16 14:51	02/18/16 21:19	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/17/16 14:51	02/18/16 21:19	1
Manganese	1.2		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:19	1
Nickel	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:19	1
Selenium	<0.050		0.050	0.020	mg/L		02/17/16 14:51	02/18/16 21:19	1
Silver	<0.025		0.025	0.010	mg/L		02/17/16 14:51	02/18/16 21:19	1
Zinc	0.19	J	0.50	0.020	mg/L		02/17/16 14:51	02/18/16 21:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.17		0.025	0.010	mg/L		02/18/16 16:36	02/19/16 19:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/17/16 14:51	02/18/16 16:10	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/17/16 14:51	02/18/16 16:10	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/17/16 16:15	02/18/16 13:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.028		0.020	0.010	mg/Kg	☼	02/18/16 16:00	02/19/16 12:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.00		0.200	0.200	SU			02/13/16 12:13	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B04 (0-1)

Lab Sample ID: 500-107509-43

Date Collected: 02/11/16 14:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.024		0.024	0.0047	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Benzene	<0.0061		0.0061	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Bromodichloromethane	<0.0061		0.0061	0.0010	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Bromoform	<0.0061		0.0061	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Bromomethane	<0.0061	*	0.0061	0.0022	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
2-Butanone (MEK)	<0.0061		0.0061	0.0022	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Carbon disulfide	<0.0061		0.0061	0.0022	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Carbon tetrachloride	<0.0061		0.0061	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Chlorobenzene	<0.0061		0.0061	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Chloroethane	<0.0061		0.0061	0.0026	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Chloroform	<0.0061		0.0061	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Chloromethane	<0.0061		0.0061	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
cis-1,2-Dichloroethene	<0.0061		0.0061	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
cis-1,3-Dichloropropene	<0.0061		0.0061	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Dibromochloromethane	<0.0061		0.0061	0.00070	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,1-Dichloroethane	<0.0061		0.0061	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,2-Dichloroethane	<0.0061		0.0061	0.00090	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,1-Dichloroethene	<0.0061		0.0061	0.0022	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,2-Dichloropropane	<0.0061		0.0061	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,3-Dichloropropane, Total	<0.0061		0.0061	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Ethylbenzene	<0.0061		0.0061	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
2-Hexanone	<0.0061		0.0061	0.0019	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Methylene Chloride	<0.0061		0.0061	0.0046	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
4-Methyl-2-pentanone (MIBK)	<0.0061		0.0061	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Methyl tert-butyl ether	<0.0061		0.0061	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Styrene	<0.0061		0.0061	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,1,2,2-Tetrachloroethane	<0.0061		0.0061	0.00096	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Tetrachloroethene	<0.0061		0.0061	0.0013	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Toluene	<0.0061		0.0061	0.0021	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
trans-1,2-Dichloroethene	<0.0061		0.0061	0.0015	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
trans-1,3-Dichloropropene	<0.0061		0.0061	0.0017	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,1,1-Trichloroethane	<0.0061		0.0061	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
1,1,2-Trichloroethane	<0.0061		0.0061	0.0012	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Trichloroethene	<0.0061		0.0061	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Vinyl acetate	<0.0061		0.0061	0.0016	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Vinyl chloride	<0.0061		0.0061	0.0014	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1
Xylenes, Total	<0.012		0.012	0.0022	mg/Kg	☼	02/12/16 09:20	02/19/16 02:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 122	02/12/16 09:20	02/19/16 02:13	1
Dibromofluoromethane	109		75 - 120	02/12/16 09:20	02/19/16 02:13	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 134	02/12/16 09:20	02/19/16 02:13	1
Toluene-d8 (Surr)	111		75 - 122	02/12/16 09:20	02/19/16 02:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.090	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.061	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
1,3-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B04 (0-1)

Lab Sample ID: 500-107509-43

Date Collected: 02/11/16 14:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.7

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	0.049	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
N-Nitrosodi-n-propylamine	<0.082		0.082	0.050	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Hexachloroethane	<0.20		0.20	0.062	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Isophorone	<0.20		0.20	0.046	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Hexachlorobutadiene	<0.20		0.20	0.064	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Naphthalene	0.037	J	0.040	0.0063	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,4-Dichlorophenol	<0.40		0.40	0.097	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4-Chloroaniline	<0.82		0.82	0.19	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,4,5-Trichlorophenol	<0.40		0.40	0.093	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Hexachlorocyclopentadiene	<0.82		0.82	0.23	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2-Methylnaphthalene	0.018	J	0.040	0.0075	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2-Nitroaniline	<0.20		0.20	0.055	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2-Chloronaphthalene	<0.20		0.20	0.045	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,6-Dinitrotoluene	<0.20		0.20	0.080	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2-Nitrophenol	<0.40		0.40	0.096	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,4-Dinitrophenol	<0.82		0.82	0.72	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Acenaphthylene	<0.040		0.040	0.0054	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
2,4-Dinitrotoluene	<0.20		0.20	0.065	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Acenaphthene	0.079		0.040	0.0073	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Dibenzofuran	<0.20		0.20	0.048	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4-Nitrophenol	<0.82		0.82	0.39	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Fluorene	0.069		0.040	0.0057	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.054	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Hexachlorobenzene	<0.082		0.082	0.0094	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Diethyl phthalate	<0.20		0.20	0.069	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Pentachlorophenol	<0.82		0.82	0.65	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
4,6-Dinitro-2-methylphenol	<0.82		0.82	0.33	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Phenanthrene	0.72		0.040	0.0057	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Anthracene	0.13		0.040	0.0068	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Carbazole	0.10	J	0.20	0.10	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Fluoranthene	1.1		0.040	0.0075	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Pyrene	1.0		0.040	0.0081	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Butyl benzyl phthalate	<0.20		0.20	0.077	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Benzo[a]anthracene	0.40		0.040	0.0055	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B04 (0-1)

Lab Sample ID: 500-107509-43

Date Collected: 02/11/16 14:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.48		0.040	0.011	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.057	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Benzo[b]fluoranthene	0.86		0.040	0.0088	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Benzo[k]fluoranthene	0.30		0.040	0.012	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Benzo[a]pyrene	0.43		0.040	0.0079	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Indeno[1,2,3-cd]pyrene	0.19		0.040	0.011	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0079	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
Benzo[g,h,i]perylene	0.16		0.040	0.013	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1
3 & 4 Methylphenol	<0.20		0.20	0.068	mg/Kg	☼	02/17/16 17:08	02/24/16 21:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	60		25 - 110	02/17/16 17:08	02/24/16 21:28	1
Phenol-d5	59		31 - 110	02/17/16 17:08	02/24/16 21:28	1
Nitrobenzene-d5	49		25 - 115	02/17/16 17:08	02/24/16 21:28	1
2-Fluorobiphenyl	57		25 - 119	02/17/16 17:08	02/24/16 21:28	1
2,4,6-Tribromophenol	59		35 - 137	02/17/16 17:08	02/24/16 21:28	1
Terphenyl-d14	76		36 - 134	02/17/16 17:08	02/24/16 21:28	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.24	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Arsenic	3.3		0.57	0.27	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Barium	27		0.57	0.11	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Beryllium	0.28		0.23	0.050	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Boron	9.8		2.9	0.40	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Cadmium	0.21		0.11	0.033	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Calcium	140000		110	37	mg/Kg	☼	02/18/16 10:17	02/23/16 02:54	10
Chromium	16		0.57	0.099	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Cobalt	4.4		0.29	0.065	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Copper	16		0.57	0.12	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Iron	9400		11	4.4	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Lead	120		0.29	0.14	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Magnesium	80000		57	23	mg/Kg	☼	02/18/16 10:17	02/23/16 02:54	10
Manganese	290		0.57	0.11	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Nickel	9.3		0.57	0.16	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Potassium	750		29	4.7	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Selenium	<0.57		0.57	0.28	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Silver	<0.29		0.29	0.067	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Sodium	1100		57	7.6	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Vanadium	10		0.29	0.084	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1
Zinc	75		1.1	0.36	mg/Kg	☼	02/18/16 10:17	02/21/16 00:49	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.34	J	0.50	0.050	mg/L		02/17/16 14:51	02/18/16 21:30	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/17/16 14:51	02/18/16 21:30	1
Boron	0.52		0.50	0.050	mg/L		02/17/16 14:51	02/18/16 21:30	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

Client Sample ID: 3011-94-B04 (0-1)

Lab Sample ID: 500-107509-43

Date Collected: 02/11/16 14:00

Matrix: Solid

Date Received: 02/12/16 07:55

Percent Solids: 80.7

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	-	02/17/16 14:51	02/18/16 21:30	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Iron	<0.40		0.40	0.20	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Manganese	1.0		0.025	0.010	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Silver	<0.025		0.025	0.010	mg/L	-	02/17/16 14:51	02/18/16 21:30	1
Zinc	0.41	J	0.50	0.020	mg/L	-	02/17/16 14:51	02/18/16 21:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.29		0.025	0.010	mg/L	-	02/18/16 16:36	02/19/16 19:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L	-	02/17/16 14:51	02/18/16 16:19	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/17/16 14:51	02/18/16 16:19	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	-	02/17/16 16:15	02/18/16 13:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.019	0.0098	mg/Kg	☼	02/18/16 16:00	02/19/16 12:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.53		0.200	0.200	SU	-		02/13/16 12:17	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

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.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

Metals

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

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107509-11

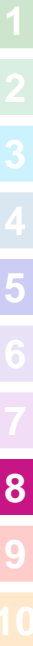
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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)	Bill To _____ (optional)
Contact: _____	Contact: _____
Company: _____	Company: _____
Address: _____	Address: _____
Address: _____	Address: _____
Phone: _____	Phone: _____
Fax: _____	Fax: _____
E-Mail: _____	PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-107509

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: _____

Client: <u>EE</u>		Client Project #: <u>100924-0008-01</u>		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: <u>IL 36</u>		Lab Project #: <u>50011864</u>		Parameter								Comments
Project Location/State: <u>Fine County, IL</u>		Lab PM: <u>D. Wray HT</u>										
Sampler: <u>S-Loop</u>												
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOC	SOC	SEM	MS	PAH	
<u>40</u>		<u>3011-94-B01 (0-1)</u>	<u>2-11-16</u>	<u>1335</u>	<u>2</u>	<u>S</u>	X	X	X	X	X	
<u>41</u>		<u>3011-94-B02 (0-1)</u>	<u>2-11-16</u>	<u>1345</u>	<u>2</u>	<u>S</u>	X	X	X	X	X	
<u>42</u>		<u>3011-94-B03 (0-1)</u>	<u>2-11-16</u>	<u>1355</u>	<u>2</u>	<u>S</u>	X	X	X	X	X	
<u>43</u>		<u>3011-94-B04 (0-1)</u>	<u>2-11-16</u>	<u>1400</u>	<u>2</u>	<u>S</u>	X	X	X	X	X	
<u>44</u>		<u>3011-94-B05 (0-1)</u>	<u>2-11-16</u>	<u>1420</u>	<u>2</u>	<u>S</u>	X	X	X	X	X	
2-11-16												

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>2/11/16</u> Time: <u>1600</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/11/16</u> Time: <u>1600</u>	Lab Courier: <u>TA</u> Shipped: _____ Hand Delivered: _____
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/11/16</u> Time: <u>1735</u>	Received By: <u>[Signature]</u> Company: <u>TA-CPE</u> Date: <u>2/12/16</u> Time: <u>0755</u>	
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	

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

Client Comments: _____

Lab Comments: _____

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107509-11

Login Number: 107509

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7,3.3,3.8,2.4,3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
3800 block of Lincoln Highway ISGS #3011-97 (Vacant Lot)

City: St. Charles State: IL Zip Code: 60119

County: Kane Township: St. Charles

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

Latitude: 41.9031205 Longitude: -88.37093494
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.9031205 Longitude: -88.37093494

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 3011-97-B01 was sampled within the construction zone adjacent to ISGS #3011-97 (Vacant Lot). Refer to PSI Report for ISGS #3011-97 (Vacant Lot) including Table 4-4, and Figures 4-14A&B.

- 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 J107456-3.

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:

3/17/16
 Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-97 (Vacant Lot)	Comparison Criteria			
BORING	3011-97-B01	MACs			TACO
SAMPLE	3011-97-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.88				
VOCs (None Detected)					
SVOCs (mg/kg)					
Benzo[a]anthracene	0.027 J	0.9	1.8	1.1	--
Benzo[b]fluoranthene	0.049	0.9	2.1	1.5	--
Chrysene	0.04 J	88	--	--	--
Fluoranthene	0.043	3,100	--	--	--
Phenanthrene	0.029 J	--	--	--	--
Pyrene	0.095	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	7.8	11.3	13	--	--
Barium	99	1,500	--	--	--
Beryllium	0.72	22	--	--	--
Boron	2.8	40	--	--	--
Cadmium	0.092 J	5.2	--	--	--
Calcium	12,000	--	--	--	--
Chromium	20	21	--	--	--
Cobalt	12	20	--	--	--
Copper	17	2,900	--	--	--
Iron	20,000 †m	15,000	15,900	--	--
Lead	85	107	--	--	--
Magnesium	8,000	325,000	--	--	--
Manganese	810 †m	630	636	--	--
Mercury	0.038	0.89	--	--	--
Nickel	22	100	--	--	--
Potassium	960	--	--	--	--
Sodium	1,400	--	--	--	--
Thallium	0.52 J	2.6	--	--	--
Vanadium	33	550	--	--	--
Zinc	66	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.47 J	--	--	--	2
Boron	0.066 J	--	--	--	2
Iron	ND U	--	--	--	5
Manganese	0.86 L	--	--	--	0.15
SPLP Metals (mg/L)					
Manganese	0.011 J	--	--	--	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: 500-107456-3
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
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LINKS

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

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

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

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Job ID: 500-107456-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-3

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-97-B01 (0-1) (500-107456-12), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-97-B01 (0-1) (500-107456-12) and (500-107456-E-1-L). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.029	J	0.042	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.043		0.042	0.0078	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.095		0.042	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.027	J	0.042	0.0057	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.040	J	0.042	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.049		0.042	0.0091	mg/Kg	1	☼	8270D	Total/NA
Arsenic	7.8		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	99		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.72		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	2.8		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.092	J	0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	12000	B ^	11	3.6	mg/Kg	1	☼	6010B	Total/NA
Chromium	20	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	12		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	20000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	85		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	8000	B ^	5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	810	B	0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	22	B	0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	960		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	1400	B	56	7.3	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.52	J	0.56	0.27	mg/Kg	1	☼	6010B	Total/NA
Vanadium	33		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	66		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.47	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.066	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.86		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.034	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.011	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.038		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.88		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-12	3011-97-B01 (0-1)	Solid	02/10/16 15:00	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Benzene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Bromodichloromethane	<0.0050		0.0050	0.00085	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Bromoform	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Bromomethane	<0.0050	*	0.0050	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
2-Butanone (MEK)	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Carbon disulfide	<0.0050		0.0050	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Carbon tetrachloride	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chlorobenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chloroethane	<0.0050		0.0050	0.0021	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chloroform	<0.0050		0.0050	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Chloromethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
cis-1,2-Dichloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
cis-1,3-Dichloropropene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Dibromochloromethane	<0.0050		0.0050	0.00058	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1-Dichloroethane	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,2-Dichloroethane	<0.0050		0.0050	0.00075	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1-Dichloroethene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,2-Dichloropropane	<0.0050		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,3-Dichloropropene, Total	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Ethylbenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Methylene Chloride	<0.0050		0.0050	0.0038	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Methyl tert-butyl ether	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Styrene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1,2,2-Tetrachloroethane	<0.0050		0.0050	0.00080	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Tetrachloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Toluene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
trans-1,2-Dichloroethene	<0.0050		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
trans-1,3-Dichloropropene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1,1-Trichloroethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
1,1,2-Trichloroethane	<0.0050		0.0050	0.00097	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Trichloroethene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Vinyl acetate	<0.0050	*	0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Vinyl chloride	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 20:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/17/16 20:54	1
Dibromofluoromethane	105		75 - 120	02/11/16 08:15	02/17/16 20:54	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 134	02/11/16 08:15	02/17/16 20:54	1
Toluene-d8 (Surr)	107		75 - 122	02/11/16 08:15	02/17/16 20:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.094	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
1,3-Dichlorobenzene	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.051	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
N-Nitrosodi-n-propylamine	<0.085		0.085	0.052	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachloroethane	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Chlorophenol	<0.21		0.21	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Nitrobenzene	<0.042		0.042	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dimethylphenol	<0.42		0.42	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Naphthalene	<0.042		0.042	0.0065	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dichlorophenol	<0.42		0.42	0.10	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Chloroaniline	<0.85		0.85	0.20	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4,6-Trichlorophenol	<0.42		0.42	0.15	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4,5-Trichlorophenol	<0.42		0.42	0.096	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachlorocyclopentadiene	<0.85		0.85	0.24	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Methylnaphthalene	<0.042		0.042	0.0078	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Nitroaniline	<0.21		0.21	0.057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Chloronaphthalene	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Chloro-3-methylphenol	<0.42		0.42	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,6-Dinitrotoluene	<0.21		0.21	0.083	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2-Nitrophenol	<0.42		0.42	0.10	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
3-Nitroaniline	<0.42		0.42	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dinitrophenol	<0.85		0.85	0.74	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Acenaphthylene	<0.042		0.042	0.0056	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
2,4-Dinitrotoluene	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Acenaphthene	<0.042		0.042	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Dibenzofuran	<0.21		0.21	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Nitrophenol	<0.85		0.85	0.40	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Fluorene	<0.042		0.042	0.0059	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Nitroaniline	<0.42		0.42	0.18	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.056	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Hexachlorobenzene	<0.085		0.085	0.0098	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Diethyl phthalate	<0.21		0.21	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Pentachlorophenol	<0.85		0.85	0.68	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
N-Nitrosodiphenylamine	<0.21		0.21	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
4,6-Dinitro-2-methylphenol	<0.85		0.85	0.34	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Phenanthrene	0.029	J	0.042	0.0059	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Anthracene	<0.042		0.042	0.0071	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Carbazole	<0.21		0.21	0.11	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Fluoranthene	0.043		0.042	0.0078	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Pyrene	0.095		0.042	0.0084	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Butyl benzyl phthalate	<0.21		0.21	0.080	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[a]anthracene	0.027	J	0.042	0.0057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.040	J	0.042	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.059	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.077	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Di-n-octyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[b]fluoranthene	0.049		0.042	0.0091	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[k]fluoranthene	<0.042		0.042	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[a]pyrene	<0.042		0.042	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Indeno[1,2,3-cd]pyrene	<0.042		0.042	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Dibenz(a,h)anthracene	<0.042		0.042	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
Benzo[g,h,i]perylene	<0.042		0.042	0.014	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1
3 & 4 Methylphenol	<0.21		0.21	0.071	mg/Kg	☼	02/12/16 07:17	02/23/16 00:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		25 - 110	02/12/16 07:17	02/23/16 00:03	1
Phenol-d5	75		31 - 110	02/12/16 07:17	02/23/16 00:03	1
Nitrobenzene-d5	75		25 - 115	02/12/16 07:17	02/23/16 00:03	1
2-Fluorobiphenyl	84		25 - 119	02/12/16 07:17	02/23/16 00:03	1
2,4,6-Tribromophenol	51		35 - 137	02/12/16 07:17	02/23/16 00:03	1
Terphenyl-d14	196	X	36 - 134	02/12/16 07:17	02/23/16 00:03	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Arsenic	7.8		0.56	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Barium	99		0.56	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Beryllium	0.72		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Boron	2.8		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Cadmium	0.092	J	0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Calcium	12000	B ^	11	3.6	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Chromium	20	B	0.56	0.096	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Cobalt	12		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Copper	17		0.56	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Iron	20000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Lead	85		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Magnesium	8000	B ^	5.6	2.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Manganese	810	B	0.56	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Nickel	22	B	0.56	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Potassium	960		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Sodium	1400	B	56	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Thallium	0.52	J	0.56	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Vanadium	33		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 01:44	1
Zinc	66		1.1	0.35	mg/Kg	☼	02/17/16 09:04	02/21/16 03:48	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.47	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:44	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:44	1
Boron	0.066	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:44	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

Client Sample ID: 3011-97-B01 (0-1)

Lab Sample ID: 500-107456-12

Date Collected: 02/10/16 15:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 77.4

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		02/14/16 08:30	02/16/16 05:44	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:44	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:44	1
Manganese	0.86		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:44	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:44	1
Zinc	0.034	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.011	J	0.025	0.010	mg/L		02/16/16 08:23	02/18/16 23:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 15:24	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:24	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		02/15/16 13:50	02/16/16 10:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.038		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.88		0.200	0.200	SU			02/13/16 10:01	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-3

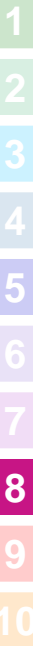
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107456
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter												Preservative Key		
EE		1009341-0008-01																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 FC3E		Lab Project #																		
Project Location/State Kane County, IL		Lab PM J. Cooper																		
Sampler S. Cooper																				
Lab ID	MS/MSD	Sample ID		Sampling		# of Containers	Matrix	VOC	SVOC	TOTAL PAH	METALS	TEMP/SMP	PAH METAL	PAH/0.50 Soil						Comments
		Date	Time																	
12		3011-97 Bol (6-1)		2/10/16	1500	2	S	X	X	X	X	X	X							
2-10-16																				

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> EE	Company EE	Date 2/10/16	Time 1615	Received By <i>[Signature]</i> A	Company A	Date 2/10/16	Time 1615	Lab Courier <u>TA</u>	
Relinquished By <i>[Signature]</i> P Neal	Company A	Date 2/10/16	Time 1755	Received By <i>[Signature]</i> TA-CHT	Company TA-CHT	Date 2/11/16	Time 0740		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: 500-107456-3

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
3800 block of Lincoln Highway ISGS #3011-98 (Agricultural Land)

City: St. Charles State: IL Zip Code: 60175

County: Kane Township: St. Charles

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

Latitude: 41.903276 Longitude: -88.367272
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.903276 Longitude: -88.367272

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 3011-98-B01 to B03 & 3011-93-B09 were sampled within the construction zone adjacent to ISGS #3011-98 (Agricultural Land). Refer to PSI Report for ISGS #3011-98 (Agricultural Land) including Table 4-4, and Figures 4-14A&B and 4-15.

- 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 J107456-4, and J107456-1.

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 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:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-98 (Agricultural Land)			Comparison Criteria			
	3011-98-B01	3011-98-B02	3011-98-B03	MACs			TACO
BORING	3011-98-B01 (0-1)	3011-98-B02 (0-1)	3011-98-B03 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
SAMPLE							
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1				
pH	8.85	8.79	8.84				
VOCs (None Detected)							
SVOCs (mg/kg)							
2-Methylnaphthalene	0.027 J	0.078	ND U	--	--	--	--
Acenaphthene	ND U	0.0076 J	ND U	570	--	--	--
Anthracene	0.017 J	0.028 J	0.031 J	12,000	--	--	--
Benzo[a]anthracene	0.096	0.16	0.18	0.9	1.8	1.1	--
Benzo[a]pyrene	0.12 †	0.2 †	0.23 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.23	0.4	0.43	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.074	0.13	0.21	--	--	--	--
Benzo[k]fluoranthene	0.084	0.14	0.15	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	0.081 J	2.6	46	--	--	--
Chrysene	0.13	0.23	0.28	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	0.047	0.09	0.42	0.2	--
Fluoranthene	0.17	0.32	0.36	3,100	--	--	--
Fluorene	ND U	0.019 J	0.006 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.074	0.13	0.21	0.9	1.6	0.9	--
Naphthalene	0.0098 J	0.024 J	ND U	1.8	--	--	--
Phenanthrene	0.1	0.17	0.19	--	--	--	--
Pyrene	0.28	0.46	0.69	2,300	--	--	--
Inorganics (mg/kg)							
Arsenic	5.7	5.2	2.7	11.3	13	--	--
Barium	79	93	56	1,500	--	--	--
Beryllium	0.58	0.63	0.22 J	22	--	--	--
Boron	7.6	7.7	9.4	40	--	--	--
Cadmium	0.24	0.39	0.11 J	5.2	--	--	--
Calcium	35,000	40,000	180,000	--	--	--	--
Chromium	17	17	12	21	--	--	--
Cobalt	8.2	8.2	3	20	--	--	--
Copper	16	19	16	2,900	--	--	--
Iron	16,000 †m	15,000	7,800	15,000	15,900	--	--
Lead	66	110 †	8.5	107	--	--	--
Magnesium	22,000	24,000	90,000	325,000	--	--	--
Manganese	540	610	300	630	636	--	--
Mercury	0.031	0.023	ND U	0.89	--	--	--
Nickel	17	18	8.9	100	--	--	--
Potassium	1,200	1,100	640	--	--	--	--
Selenium	ND U	0.38 J	ND U	1.3	--	--	--
Silver	ND U	0.12 J	ND U	4.4	--	--	--
Sodium	1,900	1,500	2,100	--	--	--	--
Thallium	ND U	0.32 J	ND U	2.6	--	--	--
Vanadium	26	25	12	550	--	--	--
Zinc	75	97	46	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	0.31 J	0.31 J	0.38 J	--	--	--	2
Boron	0.071 J	0.078 J	0.12 J	--	--	--	2
Iron	ND U	ND U	ND U	--	--	--	5
Lead	ND U	ND U	ND U	--	--	--	0.0075
Manganese	0.56 L	0.56 L	0.45 L	--	--	--	0.15
SPLP Metals (mg/L)							
Manganese	0.79 L	0.07	ND U	--	--	--	0.15

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-93 (Illinois Youth Center - St. Charles)	Comparison Criteria			
BORING	3011-93-B09	MACs			TACO
SAMPLE	3011-93-B09 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.93				
VOCs (None Detected)					
SVOCs (mg/kg)					
2-Methylnaphthalene	ND U	--	--	--	--
Acenaphthene	ND UJ	570	--	--	--
Acenaphthylene	ND UJ	--	--	--	--
Anthracene	0.02 J	12,000	--	--	--
Benzo[a]anthracene	0.16	0.9	1.8	1.1	--
Benzo[a]pyrene	0.18 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.32	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.077	--	--	--	--
Benzo[k]fluoranthene	0.12	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	46	--	--	--
Chrysene	0.21	88	--	--	--
Dibenzo(a,h)anthracene	0.021 J	0.09	0.42	0.2	--
Dibenzofuran	ND UJ	--	--	--	--
Fluoranthene	0.3	3,100	--	--	--
Fluorene	0.008 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.089	0.9	1.6	0.9	--
Naphthalene	0.017 J	1.8	--	--	--
Phenanthrene	0.13	--	--	--	--
Phenol	ND U	100	--	--	--
Pyrene	0.35 J	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	6.4 J	11.3	13	--	--
Barium	66 J	1,500	--	--	--
Beryllium	0.55	22	--	--	--
Boron	8.6 J	40	--	--	--
Cadmium	0.18	5.2	--	--	--
Calcium	70,000 J	--	--	--	--
Chromium	16 J	21	--	--	--
Cobalt	7.8 J	20	--	--	--
Copper	19	2,900	--	--	--
Iron	15,000 J	15,000	15,900	--	--
Lead	92	107	--	--	--
Magnesium	41,000 J	325,000	--	--	--
Manganese	470 J	630	636	--	--
Mercury	0.022	0.89	--	--	--
Nickel	17 J	100	--	--	--
Potassium	940 J	--	--	--	--
Selenium	0.47 J	1.3	--	--	--
Silver	ND U	4.4	--	--	--
Sodium	1,600 J	--	--	--	--
Thallium	ND U	2.6	--	--	--
Vanadium	23 J	550	--	--	--
Zinc	89 J	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	0.35 J	--	--	--	2
Boron	0.075 J	--	--	--	2
Cobalt	ND U	--	--	--	1
Iron	ND U	--	--	--	5
Lead	ND U	--	--	--	0.0075
Manganese	1.6 J L	--	--	--	0.15
Nickel	ND U	--	--	--	0.1
Zinc	ND U	--	--	--	5
SPLP Metals (mg/L)					
Lead	NA	--	--	--	0.0075
Manganese	1.4 J 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: 500-107456-1
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

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LINKS

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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Job ID: 500-107456-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-1

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample duplicate (LCSD) for batch 500-323207 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 3011-93-B05 (0-1) (500-107456-6).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8260B: Due to internal standard (ISTD) area failures, a dilution was required for the following sample: 3011-93-B03 (0-1) (500-107456-8). The sample was initially analyzed without dilution. All internal standards were outside the QC limits. The sample was re-analyzed with similar results. No usable data was obtained from the un-diluted runs. The sample was re-analyzed at a dilution using the methanol extraction method. All internal standard areas were within limits in the diluted run. Elevated reporting limits have been provided.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-93-B08 (0-1) (500-107456-2), 3011-93-B07 (0-1) (500-107456-3), 3011-93-B06 (0-1) (500-107456-4), 3011-93-B06 (0-1) (500-107456-5), 3011-93-B05 (0-1) (500-107456-6), 3011-93-B04 (0-1) (500-107456-7), 3011-93-B02 (0-1) (500-107456-9), 3011-93-B01 (0-1) (500-107456-10), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample required a dilution due to the nature of the sample matrix: 3011-93-B03 (0-1) (500-107456-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Job ID: 500-107456-1 (Continued)

Laboratory: TestAmerica Chicago (Continued)

than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-93-B09 (0-1) (500-107456-1), 3011-93-B08 (0-1) (500-107456-2), 3011-93-B07 (0-1) (500-107456-3), 3011-93-B06 (0-1) (500-107456-4), 3011-93-B06 (0-1)D (500-107456-5), 3011-93-B05 (0-1) (500-107456-6), 3011-93-B04 (0-1) (500-107456-7), 3011-93-B03 (0-1) (500-107456-8), 3011-93-B02 (0-1) (500-107456-9) and 3011-93-B01 (0-1) (500-107456-10). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

Method(s) 6010B: The following samples were diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-93-B06 (0-1)D (500-107456-5) and 3011-93-B01 (0-1) (500-107456-10). Elevated reporting limits (RLs) are provided.

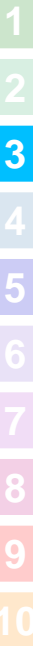
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.017	J	0.040	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0080	J F1	0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.040	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.020	J	0.040	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.30		0.040	0.0075	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.35	F1	0.040	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.16		0.040	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.21		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.32		0.040	0.0088	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18		0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.089		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.021	J	0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.077		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.4	F1 F2	0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	66	F1 F2	0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.55	F2	0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	8.6	F1 F2	2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	70000	B F2	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	16	F2 F1 B	0.56	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.8	F2	0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	15000	F2 B ^	11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	92		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	41000	B F2	56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	470	F2 B	0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	17	F2 B	0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	940	F1 F2	28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.47	J F1 F2	0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	1600	B F1	56	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23	F1 F2	0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	89	F1 F2	1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.075	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.6	F1	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.067	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.4	F1	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.022		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.93		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-1	3011-93-B09 (0-1)	Solid	02/10/16 14:05	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Bromodichloromethane	<0.0048		0.0048	0.00080	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Bromoform	<0.0048		0.0048	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Bromomethane	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Carbon disulfide	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chloroethane	<0.0048	*	0.0048	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Chloromethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1-Dichloroethane	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,2-Dichloroethane	<0.0048		0.0048	0.00070	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,2-Dichloropropane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,3-Dichloropropane, Total	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1,1,2-Tetrachloroethane	<0.0048		0.0048	0.00075	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Tetrachloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00092	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 06:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 122	02/11/16 08:15	02/18/16 06:16	1
Dibromofluoromethane	99		75 - 120	02/11/16 08:15	02/18/16 06:16	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 134	02/11/16 08:15	02/18/16 06:16	1
Toluene-d8 (Surr)	102		75 - 122	02/11/16 08:15	02/18/16 06:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.090	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Bis(2-chloroethyl)ether	<0.20	F1	0.20	0.061	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
1,3-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
1,4-Dichlorobenzene	<0.20	F1	0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20	F1	0.20	0.049	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Methylphenol	<0.20	F1 F2	0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
N-Nitrosodi-n-propylamine	<0.082		0.082	0.050	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachloroethane	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Isophorone	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dimethylphenol	<0.40	F1	0.40	0.15	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachlorobutadiene	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Naphthalene	0.017	J	0.040	0.0063	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dichlorophenol	<0.40	F1	0.40	0.097	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Chloroaniline	<0.82	F1 F2	0.82	0.19	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4,6-Trichlorophenol	<0.40	F1	0.40	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4,5-Trichlorophenol	<0.40		0.40	0.093	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachlorocyclopentadiene	<0.82	F1	0.82	0.23	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Methylnaphthalene	<0.040	F1	0.040	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Nitroaniline	<0.20	F1	0.20	0.055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Chloronaphthalene	<0.20	F1	0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Chloro-3-methylphenol	<0.40	F1	0.40	0.14	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,6-Dinitrotoluene	<0.20	F1	0.20	0.080	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2-Nitrophenol	<0.40		0.40	0.096	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
3-Nitroaniline	<0.40		0.40	0.13	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Dimethyl phthalate	<0.20	F1	0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dinitrophenol	<0.82	F1	0.82	0.72	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Acenaphthylene	<0.040	F1	0.040	0.0054	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
2,4-Dinitrotoluene	<0.20	F1	0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Acenaphthene	<0.040	F1	0.040	0.0073	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Dibenzofuran	<0.20	F1	0.20	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Nitrophenol	<0.82		0.82	0.39	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Fluorene	0.0080	J F1	0.040	0.0057	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.054	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Hexachlorobenzene	<0.082		0.082	0.0094	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Diethyl phthalate	<0.20	F1	0.20	0.069	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4-Chlorophenyl phenyl ether	<0.20	F1	0.20	0.047	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Pentachlorophenol	<0.82		0.82	0.65	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
4,6-Dinitro-2-methylphenol	<0.82		0.82	0.33	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Phenanthrene	0.13		0.040	0.0057	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Anthracene	0.020	J	0.040	0.0068	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Di-n-butyl phthalate	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Fluoranthene	0.30		0.040	0.0075	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Pyrene	0.35	F1	0.040	0.0081	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Butyl benzyl phthalate	<0.20	F1	0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[a]anthracene	0.16		0.040	0.0055	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.21		0.040	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
3,3'-Dichlorobenzidine	<0.20	F1 F2	0.20	0.057	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Bis(2-ethylhexyl) phthalate	<0.20	F1	0.20	0.074	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[b]fluoranthene	0.32		0.040	0.0088	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[k]fluoranthene	0.12		0.040	0.012	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[a]pyrene	0.18		0.040	0.0079	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Indeno[1,2,3-cd]pyrene	0.089		0.040	0.011	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Dibenz(a,h)anthracene	0.021	J	0.040	0.0079	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
Benzo[g,h,i]perylene	0.077		0.040	0.013	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1
3 & 4 Methylphenol	<0.20		0.20	0.068	mg/Kg	☼	02/12/16 07:17	02/22/16 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	78		25 - 110	02/12/16 07:17	02/22/16 19:17	1
Phenol-d5	84		31 - 110	02/12/16 07:17	02/22/16 19:17	1
Nitrobenzene-d5	72		25 - 115	02/12/16 07:17	02/22/16 19:17	1
2-Fluorobiphenyl	87		25 - 119	02/12/16 07:17	02/22/16 19:17	1
2,4,6-Tribromophenol	90		35 - 137	02/12/16 07:17	02/22/16 19:17	1
Terphenyl-d14	108		36 - 134	02/12/16 07:17	02/22/16 19:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1	F1	1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Arsenic	6.4	F1 F2	0.56	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Barium	66	F1 F2	0.56	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Beryllium	0.55	F2	0.23	0.049	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Boron	8.6	F1 F2	2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Cadmium	0.18		0.11	0.033	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Calcium	70000	B F2	110	36	mg/Kg	☼	02/17/16 09:04	02/21/16 00:32	10
Chromium	16	F2 F1 B	0.56	0.097	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Cobalt	7.8	F2	0.28	0.064	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Copper	19		0.56	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Iron	15000	F2 B ^	11	4.4	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Lead	92		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Magnesium	41000	B F2	56	23	mg/Kg	☼	02/17/16 09:04	02/21/16 00:32	10
Manganese	470	F2 B	0.56	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Nickel	17	F2 B	0.56	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Potassium	940	F1 F2	28	4.6	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Selenium	0.47	J F1 F2	0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Sodium	1600	B F1	56	7.5	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Thallium	<0.56	F2	0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Vanadium	23	F1 F2	0.28	0.082	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1
Zinc	89	F1 F2	1.1	0.36	mg/Kg	☼	02/17/16 09:04	02/20/16 00:20	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.35	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 03:53	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 03:53	1
Boron	0.075	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 03:53	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Client Sample ID: 3011-93-B09 (0-1)

Lab Sample ID: 500-107456-1

Date Collected: 02/10/16 14:05

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.0

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		02/14/16 08:30	02/16/16 03:53	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 03:53	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 03:53	1
Manganese	1.6	F1	0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 03:53	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 03:53	1
Zinc	0.067	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 03:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.4	F1	0.025	0.010	mg/L		02/16/16 08:23	02/18/16 21:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 14:19	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 14:19	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 09:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.022		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.93		0.200	0.200	SU			02/13/16 09:35	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control 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.
X	Surrogate is outside control limits
E	Result exceeded calibration range.

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance 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.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-1

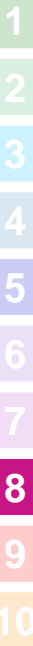
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 6
Phone: 708.534.5200 Fax: 708.534.5201



500-107456 COC

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 #: 500-107456
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: 28 33 24

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
EE		1009341-000801								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 #		Voc		SVOC		Total TAC			
IL 38								Metals			
Project Location/State		Lab PM						Total SVOC			
Kane County, IL		D. Wright						TAC Metals			
Sampler								pH/yc Solids			
S. Cooper											
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix					
1		3011-93-B09(01)	2-10-16	1405	2	S	X	X	X	X	
2		3011-93-B08(01)	2-10-16	1415	2	S	X	X	X	X	
3		3011-93-B07(01)	2-10-16	1420	2	S	X	X	X	X	
4		3011-93-B06(01)	2-10-16	1425	2	S	X	X	X	X	
5		3011-93-B06(01)D	2-10-16	1425	2	S	X	X	X	X	
6		3011-93-B05(01)	2-10-16	1435	2	S	X	X	X	X	
7		3011-93-B04(01)	2-10-16	1445	2	S	X	X	X	X	
8		3011-93-B03(01)	2-10-16	1600	2	S	X	X	X	X	
9		3011-93-B02(01)	2-10-16	1605	2	S	X	X	X	X	
10		3011-93-B01(01)	2-10-16	1610	2	S	X	X	X	X	

Turnaround Time Required (Business Days)
 ___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days 10 Days ___ 15 Days ___ Other
 Requested Due Date _____

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

Relinquished By <i>[Signature]</i> Company: <u>GC</u> Date: <u>2-10-16</u> Time: <u>1615</u>	Received By <i>[Signature]</i> Company: <u>TA</u> Date: <u>2/10/16</u> Time: <u>1615</u>	Lab Courier <u>TA</u>
Relinquished By <i>[Signature]</i> Company: <u>TA</u> Date: <u>2/10/16</u> Time: <u>1755</u>	Received By <i>[Signature]</i> Company: <u>TA-CAT</u> Date: <u>2/11/16</u> Time: <u>0740</u>	Shipped _____
Relinquished By _____	Received By _____	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: 500-107456-1

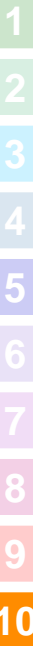
Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107456-4
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/25/2016 3:52:45 PM
Jodie Bracken, Project Management Assistant II
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Designee for
Richard Wright, Senior Project Manager
(708)534-5200
richard.wright@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



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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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Job ID: 500-107456-4

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-4

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-98-B03 (0-1) (500-107456-13), 3011-98-B02 (0-1) (500-107456-14), 3011-98-B01 (0-1) (500-107456-15), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-98-B03 (0-1) (500-107456-13), 3011-98-B02 (0-1) (500-107456-14), 3011-98-B01 (0-1) (500-107456-15) and (500-107456-E-1-L). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

Method(s) 6010B: The following samples were diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-98-B03 (0-1) (500-107456-13). Elevated reporting limits (RLs) are provided.

Method(s) 6020A: The CCB at line 75, in batch 323182, was outside the upper acceptance limit for Thallium. Also, the CCVL at line 88 was outside the upper acceptance limit for Antimony and Thallium. The associated samples 500-107456-15,16,17,18,19 and 20 were all below the RL and therefore reported.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B03 (0-1)

Lab Sample ID: 500-107456-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.0060	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.19		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.031	J	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.36		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.69		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.18		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.28		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	2.6		0.19	0.069	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.43		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.15		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.23		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.21		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.047		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.21		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.7		0.60	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.60	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.22	J	0.24	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	9.4		3.0	0.42	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.11	J	0.12	0.035	mg/Kg	1	☼	6010B	Total/NA
Calcium	18000	B	120	39	mg/Kg	10	☼	6010B	Total/NA
Chromium	12	B	0.60	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.0		0.30	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.60	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	7800	B ^	12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	8.5		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	9000	B	60	24	mg/Kg	10	☼	6010B	Total/NA
Manganese	300	B	0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.9	B	0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	640		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	2100	B	60	8.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.30	0.088	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		12	3.8	mg/Kg	10	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.12	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.45		0.025	0.010	mg/L	1		6010B	TCLP
pH	8.84		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-98-B02 (0-1)

Lab Sample ID: 500-107456-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.024	J	0.041	0.0063	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.078		0.041	0.0075	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.0076	J	0.041	0.0074	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.019	J	0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.17		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.028	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.32		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.46		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.16		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.23		0.041	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B02 (0-1) (Continued)

Lab Sample ID: 500-107456-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	0.081	J	0.21	0.075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.40		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.14		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.20		0.041	0.0079	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.2		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	93		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.63		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	7.7		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.39		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	40000	B	11	3.6	mg/Kg	1	☼	6010B	Total/NA
Chromium	17	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.2		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	15000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	110		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000	B ^	5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	610	B	0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	18	B	0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	1100		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.38	J	0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Silver	0.12	J	0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500	B	56	7.3	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.32	J	0.56	0.27	mg/Kg	1	☼	6010B	Total/NA
Vanadium	25		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	97		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.31	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.078	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.56		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.13	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.070		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.79		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-98-B01 (0-1)

Lab Sample ID: 500-107456-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0098	J	0.041	0.0063	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.027	J	0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.10		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.017	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.17		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.28		0.041	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.096		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.23		0.041	0.0089	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.084		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.12		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.074		0.041	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B01 (0-1) (Continued)

Lab Sample ID: 500-107456-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	0.074		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.7		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	79		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.58		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	7.6		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.24		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	35000	B	11	3.6	mg/Kg	1	☼	6010B	Total/NA
Chromium	17	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.2		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	16000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	66		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	22000	B ^	5.5	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	540	B	0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	17	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	1200		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	1900	B	55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	26		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	75		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.31	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.071	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.56		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.069	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.79		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.031		0.020	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.85		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-13	3011-98-B03 (0-1)	Solid	02/10/16 13:30	02/11/16 07:40
500-107456-14	3011-98-B02 (0-1)	Solid	02/10/16 13:55	02/11/16 07:40
500-107456-15	3011-98-B01 (0-1)	Solid	02/10/16 14:00	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B03 (0-1)

Lab Sample ID: 500-107456-13

Date Collected: 02/10/16 13:30

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0040	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Benzene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Bromodichloromethane	<0.0051		0.0051	0.00086	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Bromoform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Bromomethane	<0.0051	*	0.0051	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
2-Butanone (MEK)	<0.0051		0.0051	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Carbon disulfide	<0.0051		0.0051	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Carbon tetrachloride	<0.0051		0.0051	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Chlorobenzene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Chloroethane	<0.0051		0.0051	0.0021	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Chloroform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Chloromethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
cis-1,2-Dichloroethene	<0.0051		0.0051	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
cis-1,3-Dichloropropene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Dibromochloromethane	<0.0051		0.0051	0.00059	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,1-Dichloroethane	<0.0051		0.0051	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,2-Dichloroethane	<0.0051		0.0051	0.00076	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,1-Dichloroethene	<0.0051		0.0051	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,2-Dichloropropane	<0.0051		0.0051	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,3-Dichloropropane, Total	<0.0051		0.0051	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Ethylbenzene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Methylene Chloride	<0.0051		0.0051	0.0039	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Methyl tert-butyl ether	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Styrene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,1,2,2-Tetrachloroethane	<0.0051		0.0051	0.00081	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Tetrachloroethene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Toluene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
trans-1,2-Dichloroethene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
trans-1,3-Dichloropropene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,1,1-Trichloroethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
1,1,2-Trichloroethane	<0.0051		0.0051	0.00099	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Trichloroethene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Vinyl acetate	<0.0051	*	0.0051	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Vinyl chloride	<0.0051		0.0051	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 122	02/11/16 08:15	02/17/16 21:19	1
Dibromofluoromethane	105		75 - 120	02/11/16 08:15	02/17/16 21:19	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 134	02/11/16 08:15	02/17/16 21:19	1
Toluene-d8 (Surr)	108		75 - 122	02/11/16 08:15	02/17/16 21:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.084	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B03 (0-1)

Lab Sample ID: 500-107456-13

Date Collected: 02/10/16 13:30

Matrix: Solid

Date Received: 02/11/16 07:40

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	<0.19		0.19	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Fluorene	0.0060	J	0.038	0.0053	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Phenanthrene	0.19		0.038	0.0053	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Anthracene	0.031	J	0.038	0.0063	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Fluoranthene	0.36		0.038	0.0070	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Pyrene	0.69		0.038	0.0075	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Benzo[a]anthracene	0.18		0.038	0.0051	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B03 (0-1)

Lab Sample ID: 500-107456-13

Date Collected: 02/10/16 13:30

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.28		0.038	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Bis(2-ethylhexyl) phthalate	2.6		0.19	0.069	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Benzo[b]fluoranthene	0.43		0.038	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Benzo[k]fluoranthene	0.15		0.038	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Benzo[a]pyrene	0.23		0.038	0.0074	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Indeno[1,2,3-cd]pyrene	0.21		0.038	0.0098	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Dibenz(a,h)anthracene	0.047		0.038	0.0073	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
Benzo[g,h,i]perylene	0.21		0.038	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 00:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	70		25 - 110	02/12/16 07:17	02/23/16 00:29	1
Phenol-d5	73		31 - 110	02/12/16 07:17	02/23/16 00:29	1
Nitrobenzene-d5	65		25 - 115	02/12/16 07:17	02/23/16 00:29	1
2-Fluorobiphenyl	76		25 - 119	02/12/16 07:17	02/23/16 00:29	1
2,4,6-Tribromophenol	46		35 - 137	02/12/16 07:17	02/23/16 00:29	1
Terphenyl-d14	177	X	36 - 134	02/12/16 07:17	02/23/16 00:29	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Arsenic	2.7		0.60	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Barium	56		0.60	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Beryllium	0.22	J	0.24	0.052	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Boron	9.4		3.0	0.42	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Cadmium	0.11	J	0.12	0.035	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Calcium	180000	B	120	39	mg/Kg	☼	02/17/16 09:04	02/21/16 04:01	10
Chromium	12	B	0.60	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Cobalt	3.0		0.30	0.068	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Copper	16		0.60	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Iron	7800	B ^	12	4.6	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Lead	8.5		0.30	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Magnesium	90000	B	60	24	mg/Kg	☼	02/17/16 09:04	02/21/16 04:01	10
Manganese	300	B	0.60	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Nickel	8.9	B	0.60	0.16	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Potassium	640		30	4.9	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Selenium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Silver	<0.30		0.30	0.070	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Sodium	2100	B	60	8.0	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Vanadium	12		0.30	0.088	mg/Kg	☼	02/17/16 09:04	02/20/16 01:49	1
Zinc	46		12	3.8	mg/Kg	☼	02/17/16 09:04	02/21/16 04:01	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.38	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:51	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:51	1
Boron	0.12	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:51	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B03 (0-1)

Lab Sample ID: 500-107456-13

Date Collected: 02/10/16 13:30

Matrix: Solid

Date Received: 02/11/16 07:40

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		02/14/16 08:30	02/16/16 05:51	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:51	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:51	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:51	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:51	1
Manganese	0.45		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:51	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:51	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:51	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:51	1
Zinc	<0.50		0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 23:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 15:28	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:28	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		02/15/16 13:50	02/16/16 10:19	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.020		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 17:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.84		0.200	0.200	SU			02/13/16 10:05	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B02 (0-1)

Lab Sample ID: 500-107456-14

Date Collected: 02/10/16 13:55

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Benzene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Bromodichloromethane	<0.0050		0.0050	0.00085	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Bromoform	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Bromomethane	<0.0050 *		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
2-Butanone (MEK)	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Carbon disulfide	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Carbon tetrachloride	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Chlorobenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Chloroethane	<0.0050		0.0050	0.0021	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Chloroform	<0.0050		0.0050	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Chloromethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
cis-1,2-Dichloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
cis-1,3-Dichloropropene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Dibromochloromethane	<0.0050		0.0050	0.00058	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,1-Dichloroethane	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,2-Dichloroethane	<0.0050		0.0050	0.00074	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,1-Dichloroethene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,2-Dichloropropane	<0.0050		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,3-Dichloropropene, Total	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Ethylbenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Methylene Chloride	<0.0050		0.0050	0.0038	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Methyl tert-butyl ether	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Styrene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,1,2,2-Tetrachloroethane	<0.0050		0.0050	0.00080	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Tetrachloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Toluene	<0.0050		0.0050	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
trans-1,2-Dichloroethene	<0.0050		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
trans-1,3-Dichloropropene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,1,1-Trichloroethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
1,1,2-Trichloroethane	<0.0050		0.0050	0.00097	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Trichloroethene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Vinyl acetate	<0.0050 *		0.0050	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Vinyl chloride	<0.0050		0.0050	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/11/16 08:15	02/17/16 21:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 122	02/11/16 08:15	02/17/16 21:44	1
Dibromofluoromethane	109		75 - 120	02/11/16 08:15	02/17/16 21:44	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 134	02/11/16 08:15	02/17/16 21:44	1
Toluene-d8 (Surr)	109		75 - 122	02/11/16 08:15	02/17/16 21:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B02 (0-1)

Lab Sample ID: 500-107456-14

Date Collected: 02/10/16 13:55

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Hexachloroethane	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Hexachlorobutadiene	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Naphthalene	0.024	J	0.041	0.0063	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,4-Dichlorophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2-Methylnaphthalene	0.078		0.041	0.0075	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Acenaphthene	0.0076	J	0.041	0.0074	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Fluorene	0.019	J	0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
N-Nitrosodiphenylamine	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Phenanthrene	0.17		0.041	0.0057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Anthracene	0.028	J	0.041	0.0069	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Fluoranthene	0.32		0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Pyrene	0.46		0.041	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Butyl benzyl phthalate	<0.21		0.21	0.078	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Benzo[a]anthracene	0.16		0.041	0.0055	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B02 (0-1)

Lab Sample ID: 500-107456-14

Date Collected: 02/10/16 13:55

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.23		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.057	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Bis(2-ethylhexyl) phthalate	0.081	J	0.21	0.075	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Benzo[b]fluoranthene	0.40		0.041	0.0089	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Benzo[k]fluoranthene	0.14		0.041	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Benzo[a]pyrene	0.20		0.041	0.0079	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Indeno[1,2,3-cd]pyrene	0.13		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0079	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
Benzo[g,h,i]perylene	0.13		0.041	0.013	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1
3 & 4 Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:17	02/23/16 00:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	87		25 - 110	02/12/16 07:17	02/23/16 00:55	1
Phenol-d5	89		31 - 110	02/12/16 07:17	02/23/16 00:55	1
Nitrobenzene-d5	81		25 - 115	02/12/16 07:17	02/23/16 00:55	1
2-Fluorobiphenyl	98		25 - 119	02/12/16 07:17	02/23/16 00:55	1
2,4,6-Tribromophenol	62		35 - 137	02/12/16 07:17	02/23/16 00:55	1
Terphenyl-d14	177	X	36 - 134	02/12/16 07:17	02/23/16 00:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Arsenic	5.2		0.56	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Barium	93		0.56	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Beryllium	0.63		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Boron	7.7		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Cadmium	0.39		0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Calcium	40000	B	11	3.6	mg/Kg	☼	02/17/16 09:04	02/21/16 04:08	1
Chromium	17	B	0.56	0.096	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Cobalt	8.2		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Copper	19		0.56	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Iron	15000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Lead	110		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Magnesium	24000	B ^	5.6	2.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Manganese	610	B	0.56	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Nickel	18	B	0.56	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Potassium	1100		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Selenium	0.38	J	0.56	0.28	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Silver	0.12	J	0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Sodium	1500	B	56	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Thallium	0.32	J	0.56	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Vanadium	25		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 01:54	1
Zinc	97		1.1	0.35	mg/Kg	☼	02/17/16 09:04	02/21/16 04:08	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.31	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:57	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 05:57	1
Boron	0.078	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 05:57	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B02 (0-1)

Lab Sample ID: 500-107456-14

Date Collected: 02/10/16 13:55

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.9

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		02/14/16 08:30	02/16/16 05:57	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:57	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:57	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 05:57	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 05:57	1
Manganese	0.56		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:57	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:57	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 05:57	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 05:57	1
Zinc	0.13	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 05:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.070		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 23:45	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		02/14/16 08:30	02/16/16 15:32	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:32	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		02/15/16 13:50	02/16/16 10:21	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.020	0.010	mg/Kg	☼	02/16/16 16:00	02/17/16 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.79		0.200	0.200	SU			02/13/16 10:08	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B01 (0-1)

Lab Sample ID: 500-107456-15

Date Collected: 02/10/16 14:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0036	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Benzene	<0.0047		0.0047	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Bromodichloromethane	<0.0047		0.0047	0.00079	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Bromoform	<0.0047		0.0047	0.00095	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Bromomethane	<0.0047 *		0.0047	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
2-Butanone (MEK)	<0.0047		0.0047	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Carbon disulfide	<0.0047		0.0047	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Carbon tetrachloride	<0.0047		0.0047	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Chlorobenzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Chloroethane	<0.0047		0.0047	0.0020	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Chloroform	<0.0047		0.0047	0.00091	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Chloromethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
cis-1,2-Dichloroethene	<0.0047		0.0047	0.00095	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
cis-1,3-Dichloropropene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Dibromochloromethane	<0.0047		0.0047	0.00053	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,1-Dichloroethane	<0.0047		0.0047	0.00096	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,2-Dichloroethane	<0.0047		0.0047	0.00069	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,1-Dichloroethene	<0.0047		0.0047	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,2-Dichloropropane	<0.0047		0.0047	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,3-Dichloropropane, Total	<0.0047		0.0047	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Ethylbenzene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
2-Hexanone	<0.0047		0.0047	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Methylene Chloride	<0.0047		0.0047	0.0035	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.00096	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Methyl tert-butyl ether	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Styrene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,1,2,2-Tetrachloroethane	<0.0047		0.0047	0.00074	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Tetrachloroethene	<0.0047		0.0047	0.00097	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Toluene	<0.0047		0.0047	0.0016	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
trans-1,2-Dichloroethene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
trans-1,3-Dichloropropene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,1,1-Trichloroethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
1,1,2-Trichloroethane	<0.0047		0.0047	0.00090	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Trichloroethene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Vinyl acetate	<0.0047 *		0.0047	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Vinyl chloride	<0.0047		0.0047	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1
Xylenes, Total	<0.0093		0.0093	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 22:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/17/16 22:09	1
Dibromofluoromethane	109		75 - 120	02/11/16 08:15	02/17/16 22:09	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/11/16 08:15	02/17/16 22:09	1
Toluene-d8 (Surr)	112		75 - 122	02/11/16 08:15	02/17/16 22:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B01 (0-1)

Lab Sample ID: 500-107456-15

Date Collected: 02/10/16 14:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Hexachloroethane	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Naphthalene	0.0098	J	0.041	0.0063	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,4-Dichlorophenol	<0.41		0.41	0.098	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2-Methylnaphthalene	0.027	J	0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
N-Nitrosodiphenylamine	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Phenanthrene	0.10		0.041	0.0057	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Anthracene	0.017	J	0.041	0.0069	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Fluoranthene	0.17		0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Pyrene	0.28		0.041	0.0082	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Butyl benzyl phthalate	<0.21		0.21	0.078	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Benzo[a]anthracene	0.096		0.041	0.0055	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B01 (0-1)

Lab Sample ID: 500-107456-15

Date Collected: 02/10/16 14:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.13		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.075	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Benzo[b]fluoranthene	0.23		0.041	0.0089	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Benzo[k]fluoranthene	0.084		0.041	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Benzo[a]pyrene	0.12		0.041	0.0080	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Indeno[1,2,3-cd]pyrene	0.074		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0079	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
Benzo[g,h,i]perylene	0.074		0.041	0.013	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:17	02/23/16 01:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	81		25 - 110	02/12/16 07:17	02/23/16 01:20	1
Phenol-d5	85		31 - 110	02/12/16 07:17	02/23/16 01:20	1
Nitrobenzene-d5	78		25 - 115	02/12/16 07:17	02/23/16 01:20	1
2-Fluorobiphenyl	92		25 - 119	02/12/16 07:17	02/23/16 01:20	1
2,4,6-Tribromophenol	59		35 - 137	02/12/16 07:17	02/23/16 01:20	1
Terphenyl-d14	170	X	36 - 134	02/12/16 07:17	02/23/16 01:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Arsenic	5.7		0.55	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Barium	79		0.55	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Beryllium	0.58		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Boron	7.6		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Cadmium	0.24		0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Calcium	35000	B	11	3.6	mg/Kg	☼	02/17/16 09:04	02/21/16 04:22	1
Chromium	17	B	0.55	0.095	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Cobalt	8.2		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Copper	16		0.55	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Iron	16000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Lead	66		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Magnesium	22000	B ^	5.5	2.2	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Manganese	540	B	0.55	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Nickel	17	B	0.55	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Potassium	1200		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Sodium	1900	B	55	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Vanadium	26		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 02:07	1
Zinc	75		1.1	0.35	mg/Kg	☼	02/17/16 09:04	02/21/16 04:22	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.31	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 06:04	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 06:04	1
Boron	0.071	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 06:04	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

Client Sample ID: 3011-98-B01 (0-1)

Lab Sample ID: 500-107456-15

Date Collected: 02/10/16 14:00

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 78.8

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		02/14/16 08:30	02/16/16 06:04	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 06:04	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 06:04	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 06:04	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 06:04	1
Manganese	0.56		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 06:04	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 06:04	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 06:04	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 06:04	1
Zinc	0.069	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 06:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.79		0.025	0.010	mg/L		02/16/16 08:23	02/18/16 23:52	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		02/14/16 08:30	02/16/16 15:49	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 15:49	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 10:23	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.031		0.020	0.010	mg/Kg	☼	02/16/16 16:00	02/17/16 17:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.85		0.200	0.200	SU			02/13/16 10:10	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

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.
X	Surrogate is outside control limits

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-4

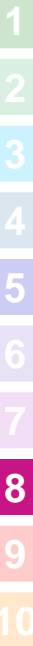
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107456
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter												Preservative Key	
EE		1009341-0008-01																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 #																	
TAS		S																	
Project Location/State		Lab PM																	
Kane County, IL		D. Wright																	
Sampler																			
S. Cooper																			
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Voc	SVOC	Total TAC Metals	TCLP/SPR TAC Metals	PTH/Op Solids							Comments	
			Date	Time															
13		3011-98-B03(0-1)	2-10-16	1330	2	S	X	X	X	X	X								
14		3011-98-B02(0-1)	2-10-16	1355	2	S	X	X	X	X	X								
15		3011-98-B01(0-1)	2-10-16	1400	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: <u>[Signature]</u>	Company: <u>EE</u>	Date: <u>2-10-16</u>	Time: <u>1615</u>	Received By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>2/10/16</u>	Time: <u>1615</u>
Relinquished By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>2/10/16</u>	Time: <u>1705</u>	Received By: <u>[Signature]</u>	Company: <u>TA-CHT</u>	Date: <u>2/11/16</u>	Time: <u>0740</u>
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-4

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
3805 Lincoln Highway ISGS #3011-101 (St. Charles Complex)

City: St. Charles State: IL Zip Code: 60119

County: Kane Township: St. Charles

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

Latitude: 41.902637 Longitude: -88.366885
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.902637 Longitude: -88.366885

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)]:

Locations 3011-101-B01 through B04 were sampled within the construction zone adjacent to ISGS #3011-101 (St. Charles Complex). Refer to PSI Report for ISGS #3011-101 (St. Charles Complex) including Table 4-4, and Figures 4-14A&B and 4-15.

- 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 J107456-7.

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:

3/17/16
 Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-101 (St. Charles Complex)				Comparison Criteria			
	3011-101-B01	3011-101-B02	3011-101-B03	3011-101-B04	MACs			TACO
BORING	3011-101-B01 (0-1)	3011-101-B02 (0-1)	3011-101-B03 (0-1)	3011-101-B04 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
SAMPLE								
MATRIX	Soil	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	0-1				
pH	8.59	8.81	8.54	8.97				
VOCs (None Detected)								
SVOCs (mg/kg)								
2-Methylnaphthalene	0.017 J	0.011 J	0.022 J	ND U	--	--	--	--
Acenaphthene	0.0083 J	0.0074 J	0.013 J	0.011 J	570	--	--	--
Acenaphthylene	ND U	ND U	0.0056 J	0.0055 J	--	--	--	--
Anthracene	0.012 J	0.02 J	0.044	0.047	12,000	--	--	--
Benzo[a]anthracene	0.073	0.13	0.22	0.23	0.9	1.8	1.1	--
Benzo[a]pyrene	0.088	0.17 †	0.26 †	0.33 †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.16	0.34	0.49	0.54	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.054	0.13	0.17	0.35	--	--	--	--
Benzo[k]fluoranthene	0.067	0.12	0.19	0.26	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	0.097 J	0.11 J	0.13 J	46	--	--	--
Chrysene	0.1	0.2	0.29	0.36	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	ND U	0.1 †	0.09	0.42	0.2	--
Fluoranthene	0.16	0.26	0.37	0.37	3,100	--	--	--
Fluorene	ND U	0.021 J	0.015 J	0.012 J	560	--	--	--
Indeno[1,2,3-cd]pyrene	0.055	0.13	0.18	0.3	0.9	1.6	0.9	--
Naphthalene	ND U	0.024 J	0.011 J	ND U	1.8	--	--	--
Phenanthrene	0.083	0.15	0.26	0.27	--	--	--	--
Pyrene	0.25	0.49	0.82	1.1	2,300	--	--	--
Inorganics (mg/kg)								
Arsenic	6.2	4.3	3.4	3.7	11.3	13	--	--
Barium	86	47	40	42	1,500	--	--	--
Beryllium	0.64	0.44	0.42	0.3	22	--	--	--
Boron	2.6	8	11	7.9	40	--	--	--
Cadmium	0.19	0.26	0.27	0.25	5.2	--	--	--
Calcium	24,000	50,000	150,000	110,000	--	--	--	--
Chromium	17	12	14	12	21	--	--	--
Cobalt	9.9	5.6	5	5.3	20	--	--	--
Copper	18	16	17	17	2,900	--	--	--
Iron	16,000 †m	13,000	12,000	9,200	15,000	15,900	--	--
Lead	85	54	59	62	107	--	--	--
Magnesium	15,000	28,000	88,000	68,000	325,000	--	--	--
Manganese	610	350	440	390	630	636	--	--
Mercury	0.032	0.015 J	0.023	0.019 J	0.89	--	--	--
Nickel	19	14	12	12	100	--	--	--
Potassium	710	780	910	720	--	--	--	--
Selenium	ND U	ND U	ND U	0.22 J	1.3	--	--	--
Silver	ND U	ND U	0.08 J	0.053 J	4.4	--	--	--
Sodium	1,500	980	1,000	1,000	--	--	--	--
Thallium	ND U	ND U	ND U	0.29 J	2.6	--	--	--
Vanadium	22	17	16	12	550	--	--	--
Zinc	73	78	100	86	5,100	--	--	--
TCLP Metals (mg/L)								
Barium	0.45 J	0.23 J	0.23 J	0.23 J	--	--	--	2
Boron	0.069 J	0.077 J	0.071 J	0.066 J	--	--	--	2
Iron	ND U	ND U	ND U	ND U	--	--	--	5
Manganese	0.88 L	0.98 L	0.53 L	0.95 L	--	--	--	0.15
Nickel	ND U	ND U	ND U	ND U	--	--	--	0.1
SPLP Metals (mg/L)								
Manganese	0.34 L	0.019 J	0.21 L	0.017 J	--	--	--	0.15

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107456-7
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/25/2016 4:01:40 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

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

LINKS

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results through
TotalAccess

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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.

1

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Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Job ID: 500-107456-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-7

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 3011-101-B02 (0-1) (500-107456-19), 3011-101-B01 (0-1) (500-107456-20) and 3011-101-B04 (0-1) (500-107456-21).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323512: Bromomethane. This is not indicative of a systematic control problem because this was a random marginal exceedance. Qualified results have been reported.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 323205: Bromomethane and Vinyl Acetate. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

GC/MS Semi VOA

Method(s) 8270D: The following samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-101-B03 (0-1) (500-107456-18), 3011-101-B02 (0-1) (500-107456-19), 3011-101-B01 (0-1) (500-107456-20), 3011-101-B04 (0-1) (500-107456-21), 3011-101-B05 (0-1) (500-107456-22), (500-107456-E-1-B MS) and (500-107456-E-1-C MSD). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following sample contained two base/neutral surrogate outside acceptance limits: (500-107456-E-1-B MS). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits. The MSD was within limits therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323173 and analytical batch 500-323716 contained Iron, Calcium, and Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The initial calibration blank (ICB) was outside of the method control limits for Calcium, Iron, and Magnesium associated with the samples 3011-101-B03 (0-1) (500-107456-18), 3011-101-B02 (0-1) (500-107456-19), 3011-101-B01 (0-1) (500-107456-20) and (500-107456-E-1-L). The continuing calibration verifications (CCB), and other QC was within the control limits, therefore the data has been reported.

Method(s) 6010B: The following samples were diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-101-B03 (0-1) (500-107456-18). Elevated reporting limits (RLs) are provided.

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Job ID: 500-107456-7 (Continued)

Laboratory: TestAmerica Chicago (Continued)

Method(s) 6010B: The method blank for preparation batch 500-323176 and analytical batch 500-323879 contained Chromium above the reporting limit (RL). Associated samples 3011-101-B04 (0-1) (500-107456-21) and 3011-101-B05 (0-1) (500-107456-22) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

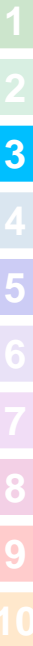
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

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

Organic Prep

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



Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.011	J	0.039	0.0060	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.022	J	0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.0056	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.013	J	0.039	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.015	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.26		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.044		0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.37		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.82		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.22		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.29		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.11	J	0.20	0.072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.49		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.19		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	0.18		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.17		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.4		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	40		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.42		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	11		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.27		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	14	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.0		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	12000	B ^	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	59		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	88000	B	55	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	440	B	0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	12	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	910		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Silver	0.080	J	0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000	B	55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	100		11	3.5	mg/Kg	10	☼	6010B	Total/NA
Barium	0.23	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.071	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.53		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.087	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.21		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.54		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-101-B02 (0-1)

Lab Sample ID: 500-107456-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.024	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.011	J	0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.0074	J	0.038	0.0069	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B02 (0-1) (Continued)

Lab Sample ID: 500-107456-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.021	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.15		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.020	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.26		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.49		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.13		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.20		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.097	J	0.19	0.070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.34		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.17		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.3		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	47		0.53	0.096	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.44		0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	8.0		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.26		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	50000	B	11	3.4	mg/Kg	1	☼	6010B	Total/NA
Chromium	12	B	0.53	0.091	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.6		0.26	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	13000	B ^	11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	54		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	28000	B ^	5.3	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	350	B	0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	14	B	0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	780		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Sodium	980	B	53	7.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA
Zinc	78		1.1	0.33	mg/Kg	1	☼	6010B	Total/NA
Barium	0.23	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.077	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.98		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.073	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.019	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.017	0.0090	mg/Kg	1	☼	7471B	Total/NA
pH	8.81		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-101-B01 (0-1)

Lab Sample ID: 500-107456-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.017	J	0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.0083	J	0.041	0.0075	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.083		0.041	0.0058	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.012	J	0.041	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.16		0.041	0.0077	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.25		0.041	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.073		0.041	0.0056	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.10		0.041	0.011	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B01 (0-1) (Continued)

Lab Sample ID: 500-107456-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.16		0.041	0.0090	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.067		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.088		0.041	0.0080	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.055		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.054		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.2		0.52	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	86		0.52	0.095	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.64		0.21	0.045	mg/Kg	1	☼	6010B	Total/NA
Boron	2.6		2.6	0.36	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.19		0.10	0.030	mg/Kg	1	☼	6010B	Total/NA
Calcium	24000	B	10	3.4	mg/Kg	1	☼	6010B	Total/NA
Chromium	17	B	0.52	0.090	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.9		0.26	0.059	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.52	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	16000	B ^	10	4.0	mg/Kg	1	☼	6010B	Total/NA
Lead	85		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	15000	B ^	5.2	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	610	B	0.52	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	19	B	0.52	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	710		26	4.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500	B	52	6.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	22		0.26	0.076	mg/Kg	1	☼	6010B	Total/NA
Zinc	73		1.0	0.33	mg/Kg	1	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.069	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.88		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.070	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.34		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.032		0.021	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.59		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-101-B04 (0-1)

Lab Sample ID: 500-107456-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0055	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.011	J	0.039	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.012	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.27		0.039	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.047		0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.37		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.1		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.23		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.36		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.13	J	0.20	0.071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.54		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.26		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.33		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.30		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.10		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.35		0.039	0.013	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B04 (0-1) (Continued)

Lab Sample ID: 500-107456-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.7		0.45	0.21	mg/Kg	1	☼	6010B	Total/NA
Barium	42		0.45	0.082	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.18	0.039	mg/Kg	1	☼	6010B	Total/NA
Boron	7.9		2.3	0.31	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.25		0.090	0.026	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	90	29	mg/Kg	10	☼	6010B	Total/NA
Chromium	12		0.45	0.077	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.3		0.23	0.051	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.45	0.098	mg/Kg	1	☼	6010B	Total/NA
Iron	9200		9.0	3.5	mg/Kg	1	☼	6010B	Total/NA
Lead	62		0.23	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	68000	B	45	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	390		0.45	0.089	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.45	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	720		23	3.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.22	J	0.45	0.22	mg/Kg	1	☼	6010B	Total/NA
Silver	0.053	J	0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000		45	5.9	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.29	J	0.45	0.22	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.23	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	86		0.90	0.29	mg/Kg	1	☼	6010B	Total/NA
Barium	0.23	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.066	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.95		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.082	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.017	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.019	J	0.020	0.011	mg/Kg	1	☼	7471B	Total/NA
pH	8.97		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-18	3011-101-B03 (0-1)	Solid	02/10/16 15:10	02/11/16 07:40
500-107456-19	3011-101-B02 (0-1)	Solid	02/10/16 15:20	02/11/16 07:40
500-107456-20	3011-101-B01 (0-1)	Solid	02/10/16 15:25	02/11/16 07:40
500-107456-21	3011-101-B04 (0-1)	Solid	02/10/16 15:30	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Bromodichloromethane	<0.0048		0.0048	0.00081	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Bromoform	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Bromomethane	<0.0048	*	0.0048	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Chloromethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00098	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1-Dichloroethane	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00099	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00093	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Vinyl acetate	<0.0048	*	0.0048	0.0013	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1
Xylenes, Total	<0.0096		0.0096	0.0018	mg/Kg	☼	02/11/16 08:15	02/17/16 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/17/16 23:24	1
Dibromofluoromethane	105		75 - 120	02/11/16 08:15	02/17/16 23:24	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 134	02/11/16 08:15	02/17/16 23:24	1
Toluene-d8 (Surr)	110		75 - 122	02/11/16 08:15	02/17/16 23:24	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	☼	02/12/16 07:17	02/23/16 02:38	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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	☼	02/12/16 07:17	02/23/16 02:38	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Naphthalene	0.011	J	0.039	0.0060	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Methylnaphthalene	0.022	J	0.039	0.0072	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Acenaphthylene	0.0056	J	0.039	0.0052	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Acenaphthene	0.013	J	0.039	0.0070	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Fluorene	0.015	J	0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Phenanthrene	0.26		0.039	0.0055	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Anthracene	0.044		0.039	0.0065	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Fluoranthene	0.37		0.039	0.0073	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Pyrene	0.82		0.039	0.0078	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[a]anthracene	0.22		0.039	0.0053	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.29		0.039	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Bis(2-ethylhexyl) phthalate	0.11	J	0.20	0.072	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[b]fluoranthene	0.49		0.039	0.0084	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[k]fluoranthene	0.19		0.039	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[a]pyrene	0.26		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Indeno[1,2,3-cd]pyrene	0.18		0.039	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
Benzo[g,h,i]perylene	0.17		0.039	0.013	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	90		25 - 110	02/12/16 07:17	02/23/16 02:38	1
Phenol-d5	92		31 - 110	02/12/16 07:17	02/23/16 02:38	1
Nitrobenzene-d5	85		25 - 115	02/12/16 07:17	02/23/16 02:38	1
2-Fluorobiphenyl	94		25 - 119	02/12/16 07:17	02/23/16 02:38	1
2,4,6-Tribromophenol	102		35 - 137	02/12/16 07:17	02/23/16 02:38	1
Terphenyl-d14	225	X	36 - 134	02/12/16 07:17	02/23/16 02:38	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.23	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Arsenic	3.4		0.55	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Barium	40		0.55	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Beryllium	0.42		0.22	0.048	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Boron	11		2.8	0.39	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Cadmium	0.27		0.11	0.032	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Calcium	150000	B	110	36	mg/Kg	☼	02/17/16 09:04	02/21/16 05:25	10
Chromium	14	B	0.55	0.095	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Cobalt	5.0		0.28	0.063	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Copper	17		0.55	0.12	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Iron	12000	B ^	11	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Lead	59		0.28	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Magnesium	88000	B	55	23	mg/Kg	☼	02/17/16 09:04	02/21/16 05:25	10
Manganese	440	B	0.55	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Nickel	12	B	0.55	0.15	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Potassium	910		28	4.5	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Silver	0.080	J	0.28	0.065	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Sodium	1000	B	55	7.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Vanadium	16		0.28	0.081	mg/Kg	☼	02/17/16 09:04	02/20/16 02:22	1
Zinc	100		11	3.5	mg/Kg	☼	02/17/16 09:04	02/21/16 05:25	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.23	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 22:13	1
Boron	0.071	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:13	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B03 (0-1)

Lab Sample ID: 500-107456-18

Date Collected: 02/10/16 15:10

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 81.3

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		02/14/16 08:30	02/16/16 22:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 22:13	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 22:13	1
Manganese	0.53		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 22:13	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:13	1
Zinc	0.087	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 22:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.21		0.025	0.010	mg/L		02/16/16 08:23	02/19/16 00:13	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		02/14/16 08:30	02/16/16 16:01	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 16:01	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		02/15/16 13:50	02/16/16 10:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023		0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 18:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.54		0.200	0.200	SU			02/13/16 10:17	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B02 (0-1)

Lab Sample ID: 500-107456-19

Date Collected: 02/10/16 15:20

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 84.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0032	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Benzene	<0.0042		0.0042	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Bromodichloromethane	<0.0042		0.0042	0.00070	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Bromoform	<0.0042		0.0042	0.00085	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Bromomethane	<0.0042		0.0042	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
2-Butanone (MEK)	<0.0042		0.0042	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Carbon disulfide	<0.0042		0.0042	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Carbon tetrachloride	<0.0042		0.0042	0.00089	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Chlorobenzene	<0.0042		0.0042	0.00099	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Chloroethane	<0.0042		0.0042	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Chloroform	<0.0042		0.0042	0.00081	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Chloromethane	<0.0042		0.0042	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
cis-1,2-Dichloroethene	<0.0042		0.0042	0.00085	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
cis-1,3-Dichloropropene	<0.0042		0.0042	0.00095	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Dibromochloromethane	<0.0042		0.0042	0.00048	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,1-Dichloroethane	<0.0042		0.0042	0.00086	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,2-Dichloroethane	<0.0042		0.0042	0.00062	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,1-Dichloroethene	<0.0042		0.0042	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,2-Dichloropropane	<0.0042		0.0042	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,3-Dichloropropane, Total	<0.0042		0.0042	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Ethylbenzene	<0.0042		0.0042	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
2-Hexanone	<0.0042		0.0042	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Methylene Chloride	<0.0042		0.0042	0.0032	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
4-Methyl-2-pentanone (MIBK)	<0.0042		0.0042	0.00086	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Methyl tert-butyl ether	<0.0042		0.0042	0.00099	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Styrene	<0.0042		0.0042	0.00098	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,1,2,2-Tetrachloroethane	<0.0042		0.0042	0.00066	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Tetrachloroethene	<0.0042		0.0042	0.00087	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Toluene	<0.0042		0.0042	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
trans-1,2-Dichloroethene	<0.0042		0.0042	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
trans-1,3-Dichloropropene	<0.0042		0.0042	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,1,1-Trichloroethane	<0.0042		0.0042	0.00097	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
1,1,2-Trichloroethane	<0.0042		0.0042	0.00081	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Trichloroethene	<0.0042		0.0042	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Vinyl acetate	<0.0042 *		0.0042	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Vinyl chloride	<0.0042		0.0042	0.00099	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1
Xylenes, Total	<0.0083		0.0083	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 12:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 122	02/11/16 08:15	02/18/16 12:41	1
Dibromofluoromethane	109		75 - 120	02/11/16 08:15	02/18/16 12:41	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/11/16 08:15	02/18/16 12:41	1
Toluene-d8 (Surr)	111		75 - 122	02/11/16 08:15	02/18/16 12:41	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	☼	02/12/16 07:17	02/23/16 03:04	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B02 (0-1)

Lab Sample ID: 500-107456-19

Date Collected: 02/10/16 15:20

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 84.4

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	☼	02/12/16 07:17	02/23/16 03:04	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Naphthalene	0.024	J	0.038	0.0059	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2-Methylnaphthalene	0.011	J	0.038	0.0071	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,4-Dinitrophenol	<0.77		0.77	0.68	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Acenaphthene	0.0074	J	0.038	0.0069	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4-Nitrophenol	<0.77		0.77	0.37	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Fluorene	0.021	J	0.038	0.0054	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Hexachlorobenzene	<0.077		0.077	0.0089	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Pentachlorophenol	<0.77		0.77	0.62	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Phenanthrene	0.15		0.038	0.0054	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Anthracene	0.020	J	0.038	0.0064	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Fluoranthene	0.26		0.038	0.0071	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Pyrene	0.49		0.038	0.0076	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Benzo[a]anthracene	0.13		0.038	0.0052	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B02 (0-1)

Lab Sample ID: 500-107456-19

Date Collected: 02/10/16 15:20

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 84.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.20		0.038	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Bis(2-ethylhexyl) phthalate	0.097	J	0.19	0.070	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Benzo[b]fluoranthene	0.34		0.038	0.0083	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Benzo[k]fluoranthene	0.12		0.038	0.011	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Benzo[a]pyrene	0.17		0.038	0.0074	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Indeno[1,2,3-cd]pyrene	0.13		0.038	0.010	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
Benzo[g,h,i]perylene	0.13		0.038	0.012	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/12/16 07:17	02/23/16 03:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	80		25 - 110	02/12/16 07:17	02/23/16 03:04	1
Phenol-d5	64		31 - 110	02/12/16 07:17	02/23/16 03:04	1
Nitrobenzene-d5	82		25 - 115	02/12/16 07:17	02/23/16 03:04	1
2-Fluorobiphenyl	66		25 - 119	02/12/16 07:17	02/23/16 03:04	1
2,4,6-Tribromophenol	134		35 - 137	02/12/16 07:17	02/23/16 03:04	1
Terphenyl-d14	195	X	36 - 134	02/12/16 07:17	02/23/16 03:04	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Arsenic	4.3		0.53	0.24	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Barium	47		0.53	0.096	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Beryllium	0.44		0.21	0.046	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Boron	8.0		2.6	0.37	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Cadmium	0.26		0.11	0.031	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Calcium	50000	B	11	3.4	mg/Kg	☼	02/17/16 09:04	02/21/16 05:31	1
Chromium	12	B	0.53	0.091	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Cobalt	5.6		0.26	0.060	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Copper	16		0.53	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Iron	13000	B ^	11	4.1	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Lead	54		0.26	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Magnesium	28000	B ^	5.3	2.1	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Manganese	350	B	0.53	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Nickel	14	B	0.53	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Potassium	780		26	4.3	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Selenium	<0.53		0.53	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Sodium	980	B	53	7.0	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Vanadium	17		0.26	0.077	mg/Kg	☼	02/17/16 09:04	02/20/16 02:27	1
Zinc	78		1.1	0.33	mg/Kg	☼	02/17/16 09:04	02/21/16 05:31	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.23	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:19	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 22:19	1
Boron	0.077	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:19	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B02 (0-1)

Lab Sample ID: 500-107456-19

Date Collected: 02/10/16 15:20

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 84.4

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		02/14/16 08:30	02/16/16 22:19	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:19	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:19	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/16/16 22:19	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/16/16 22:19	1
Manganese	0.98		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:19	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:19	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/16/16 22:19	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/16/16 22:19	1
Zinc	0.073	J B	0.50	0.020	mg/L		02/14/16 08:30	02/16/16 22:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.019	J	0.025	0.010	mg/L		02/16/16 08:23	02/19/16 00:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060	^	0.0060	0.0060	mg/L		02/14/16 08:30	02/16/16 16:05	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/14/16 08:30	02/16/16 16:05	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 10:35	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.017	0.0090	mg/Kg	☼	02/16/16 16:00	02/17/16 18:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.81		0.200	0.200	SU			02/13/16 10:19	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B01 (0-1)

Lab Sample ID: 500-107456-20

Date Collected: 02/10/16 15:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 76.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.021		0.021	0.0041	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Benzene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Bromodichloromethane	<0.0052		0.0052	0.00088	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Bromoform	<0.0052		0.0052	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Bromomethane	<0.0052		0.0052	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
2-Butanone (MEK)	<0.0052		0.0052	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Carbon disulfide	<0.0052		0.0052	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Carbon tetrachloride	<0.0052		0.0052	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Chlorobenzene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Chloroethane	<0.0052		0.0052	0.0022	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Chloroform	<0.0052		0.0052	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Chloromethane	<0.0052		0.0052	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
cis-1,2-Dichloroethene	<0.0052		0.0052	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
cis-1,3-Dichloropropene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Dibromochloromethane	<0.0052		0.0052	0.00060	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,1-Dichloroethane	<0.0052		0.0052	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,2-Dichloroethane	<0.0052		0.0052	0.00078	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,1-Dichloroethene	<0.0052		0.0052	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,2-Dichloropropane	<0.0052		0.0052	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,3-Dichloropropane, Total	<0.0052		0.0052	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Ethylbenzene	<0.0052		0.0052	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
2-Hexanone	<0.0052		0.0052	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Methylene Chloride	<0.0052		0.0052	0.0040	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
4-Methyl-2-pentanone (MIBK)	<0.0052		0.0052	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Methyl tert-butyl ether	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Styrene	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,1,2,2-Tetrachloroethane	<0.0052		0.0052	0.00083	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Tetrachloroethene	<0.0052		0.0052	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Toluene	<0.0052		0.0052	0.0018	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
trans-1,2-Dichloroethene	<0.0052		0.0052	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
trans-1,3-Dichloropropene	<0.0052		0.0052	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,1,1-Trichloroethane	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
1,1,2-Trichloroethane	<0.0052		0.0052	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Trichloroethene	<0.0052		0.0052	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Vinyl acetate	<0.0052 *		0.0052	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Vinyl chloride	<0.0052		0.0052	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 13:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/18/16 13:06	1
Dibromofluoromethane	107		75 - 120	02/11/16 08:15	02/18/16 13:06	1
1,2-Dichloroethane-d4 (Surr)	119		70 - 134	02/11/16 08:15	02/18/16 13:06	1
Toluene-d8 (Surr)	108		75 - 122	02/11/16 08:15	02/18/16 13:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.092	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B01 (0-1)

Lab Sample ID: 500-107456-20

Date Collected: 02/10/16 15:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 76.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2-Methylphenol	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
N-Nitrosodi-n-propylamine	<0.084		0.084	0.051	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Hexachloroethane	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Hexachlorobutadiene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Naphthalene	<0.041		0.041	0.0064	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,4-Dichlorophenol	<0.41		0.41	0.099	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4-Chloroaniline	<0.84		0.84	0.20	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,4,5-Trichlorophenol	<0.41		0.41	0.095	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Hexachlorocyclopentadiene	<0.84		0.84	0.24	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2-Methylnaphthalene	0.017	J	0.041	0.0076	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,6-Dinitrotoluene	<0.21		0.21	0.082	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2-Nitrophenol	<0.41		0.41	0.098	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,4-Dinitrophenol	<0.84		0.84	0.73	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Acenaphthylene	<0.041		0.041	0.0055	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
2,4-Dinitrotoluene	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Acenaphthene	0.0083	J	0.041	0.0075	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4-Nitrophenol	<0.84		0.84	0.40	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Hexachlorobenzene	<0.084		0.084	0.0096	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Diethyl phthalate	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Pentachlorophenol	<0.84		0.84	0.67	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
4,6-Dinitro-2-methylphenol	<0.84		0.84	0.33	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Phenanthrene	0.083		0.041	0.0058	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Anthracene	0.012	J	0.041	0.0069	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Di-n-butyl phthalate	<0.21		0.21	0.063	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Fluoranthene	0.16		0.041	0.0077	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Pyrene	0.25		0.041	0.0083	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Butyl benzyl phthalate	<0.21		0.21	0.079	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Benzo[a]anthracene	0.073		0.041	0.0056	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B01 (0-1)

Lab Sample ID: 500-107456-20

Date Collected: 02/10/16 15:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 76.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.10		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.058	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.076	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Di-n-octyl phthalate	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Benzo[b]fluoranthene	0.16		0.041	0.0090	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Benzo[k]fluoranthene	0.067		0.041	0.012	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Benzo[a]pyrene	0.088		0.041	0.0080	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Indeno[1,2,3-cd]pyrene	0.055		0.041	0.011	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0080	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
Benzo[g,h,i]perylene	0.054		0.041	0.013	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1
3 & 4 Methylphenol	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:17	02/24/16 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	52		25 - 110	02/12/16 07:17	02/24/16 15:18	1
Phenol-d5	58		31 - 110	02/12/16 07:17	02/24/16 15:18	1
Nitrobenzene-d5	46		25 - 115	02/12/16 07:17	02/24/16 15:18	1
2-Fluorobiphenyl	59		25 - 119	02/12/16 07:17	02/24/16 15:18	1
2,4,6-Tribromophenol	38		35 - 137	02/12/16 07:17	02/24/16 15:18	1
Terphenyl-d14	157	X	36 - 134	02/12/16 07:17	02/24/16 15:18	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	0.22	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Arsenic	6.2		0.52	0.24	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Barium	86		0.52	0.095	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Beryllium	0.64		0.21	0.045	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Boron	2.6		2.6	0.36	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Cadmium	0.19		0.10	0.030	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Calcium	24000	B	10	3.4	mg/Kg	☼	02/17/16 09:04	02/21/16 05:45	1
Chromium	17	B	0.52	0.090	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Cobalt	9.9		0.26	0.059	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Copper	18		0.52	0.11	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Iron	16000	B ^	10	4.0	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Lead	85		0.26	0.13	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Magnesium	15000	B ^	5.2	2.1	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Manganese	610	B	0.52	0.10	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Nickel	19	B	0.52	0.14	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Potassium	710		26	4.2	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Selenium	<0.52		0.52	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Silver	<0.26		0.26	0.061	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Sodium	1500	B	52	6.9	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Vanadium	22		0.26	0.076	mg/Kg	☼	02/17/16 09:04	02/20/16 02:32	1
Zinc	73		1.0	0.33	mg/Kg	☼	02/17/16 09:04	02/21/16 05:45	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.45	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:42	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/16/16 22:42	1
Boron	0.069	J	0.50	0.050	mg/L		02/14/16 08:30	02/16/16 22:42	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B01 (0-1)

Lab Sample ID: 500-107456-20

Date Collected: 02/10/16 15:25

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 76.4

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	-	02/14/16 08:30	02/16/16 22:42	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Iron	<0.40		0.40	0.20	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Manganese	0.88		0.025	0.010	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Silver	<0.025		0.025	0.010	mg/L	-	02/14/16 08:30	02/16/16 22:42	1
Zinc	0.070	J B	0.50	0.020	mg/L	-	02/14/16 08:30	02/16/16 22:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.34		0.025	0.010	mg/L	-	02/16/16 08:23	02/19/16 00:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060	^	0.0060	0.0060	mg/L	-	02/14/16 08:30	02/16/16 16:09	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L	-	02/14/16 08:30	02/16/16 16:09	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L	-	02/15/16 13:50	02/16/16 10:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.032		0.021	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 18:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.59		0.200	0.200	SU	-		02/13/16 10:22	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B04 (0-1)

Lab Sample ID: 500-107456-21

Date Collected: 02/10/16 15:30

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Bromoform	<0.0045		0.0045	0.00091	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Bromomethane	<0.0045		0.0045	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Carbon disulfide	<0.0045		0.0045	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Chloroform	<0.0045		0.0045	0.00087	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00091	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,1-Dichloroethane	<0.0045		0.0045	0.00092	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,2-Dichloroethane	<0.0045		0.0045	0.00066	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,3-Dichloropropane, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00092	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Styrene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Vinyl acetate	<0.0045 *		0.0045	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 122	02/11/16 08:15	02/18/16 13:31	1
Dibromofluoromethane	107		75 - 120	02/11/16 08:15	02/18/16 13:31	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	02/11/16 08:15	02/18/16 13:31	1
Toluene-d8 (Surr)	111		75 - 122	02/11/16 08:15	02/18/16 13:31	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	☼	02/12/16 07:27	02/21/16 22:50	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B04 (0-1)

Lab Sample ID: 500-107456-21

Date Collected: 02/10/16 15:30

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.7

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	☼	02/12/16 07:27	02/21/16 22:50	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Hexachlorocyclopentadiene	<0.79		0.79	0.22	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Acenaphthylene	0.0055	J	0.039	0.0052	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Acenaphthene	0.011	J	0.039	0.0070	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Fluorene	0.012	J	0.039	0.0055	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Phenanthrene	0.27		0.039	0.0054	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Anthracene	0.047		0.039	0.0065	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Fluoranthene	0.37		0.039	0.0072	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Pyrene	1.1		0.039	0.0078	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Benzo[a]anthracene	0.23		0.039	0.0053	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B04 (0-1)

Lab Sample ID: 500-107456-21

Date Collected: 02/10/16 15:30

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.36		0.039	0.011	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Bis(2-ethylhexyl) phthalate	0.13	J	0.20	0.071	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Benzo[b]fluoranthene	0.54		0.039	0.0084	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Benzo[k]fluoranthene	0.26		0.039	0.012	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Benzo[a]pyrene	0.33		0.039	0.0076	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Indeno[1,2,3-cd]pyrene	0.30		0.039	0.010	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Dibenz(a,h)anthracene	0.10		0.039	0.0076	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
Benzo[g,h,i]perylene	0.35		0.039	0.013	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/16 07:27	02/21/16 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	102		25 - 110	02/12/16 07:27	02/21/16 22:50	1
Phenol-d5	92		31 - 110	02/12/16 07:27	02/21/16 22:50	1
Nitrobenzene-d5	84		25 - 115	02/12/16 07:27	02/21/16 22:50	1
2-Fluorobiphenyl	85		25 - 119	02/12/16 07:27	02/21/16 22:50	1
2,4,6-Tribromophenol	70		35 - 137	02/12/16 07:27	02/21/16 22:50	1
Terphenyl-d14	233	X	36 - 134	02/12/16 07:27	02/21/16 22:50	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.90		0.90	0.19	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Arsenic	3.7		0.45	0.21	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Barium	42		0.45	0.082	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Beryllium	0.30		0.18	0.039	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Boron	7.9		2.3	0.31	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Cadmium	0.25		0.090	0.026	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Calcium	110000	B	90	29	mg/Kg	☼	02/17/16 09:29	02/22/16 13:05	10
Chromium	12		0.45	0.077	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Cobalt	5.3		0.23	0.051	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Copper	17		0.45	0.098	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Iron	9200		9.0	3.5	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Lead	62		0.23	0.11	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Magnesium	68000	B	45	18	mg/Kg	☼	02/17/16 09:29	02/22/16 13:05	10
Manganese	390		0.45	0.089	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Nickel	12		0.45	0.12	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Potassium	720		23	3.7	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Selenium	0.22	J	0.45	0.22	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Silver	0.053	J	0.23	0.053	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Sodium	1000		45	5.9	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Thallium	0.29	J	0.45	0.22	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Vanadium	12		0.23	0.066	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1
Zinc	86		0.90	0.29	mg/Kg	☼	02/17/16 09:29	02/20/16 21:39	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.23	J	0.50	0.050	mg/L		02/14/16 08:30	02/17/16 05:39	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/17/16 05:39	1
Boron	0.066	J	0.50	0.050	mg/L		02/14/16 08:30	02/17/16 05:39	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

Client Sample ID: 3011-101-B04 (0-1)

Lab Sample ID: 500-107456-21

Date Collected: 02/10/16 15:30

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 82.7

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		02/14/16 08:30	02/17/16 05:39	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 05:39	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 05:39	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/17/16 05:39	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/17/16 05:39	1
Manganese	0.95		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 05:39	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 05:39	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/17/16 05:39	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 05:39	1
Zinc	0.082	J	0.50	0.020	mg/L		02/14/16 08:30	02/17/16 05:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.017	J	0.025	0.010	mg/L		02/16/16 08:22	02/17/16 11:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/18/16 12:13	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/18/16 12:13	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/15/16 13:50	02/16/16 11:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.019	J	0.020	0.011	mg/Kg	☼	02/16/16 16:00	02/17/16 18:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.97		0.200	0.200	SU			02/13/16 10:24	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-7

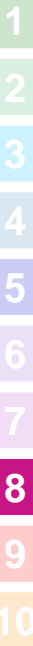
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
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 #: 500-107456
 Chain of Custody Number: _____
 Page _____ of _____
 Temperature °C of Cooler: _____

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
EE		1009341.000E.01								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 #										
FC38												
Project Location/State		Lab RM										
Kane County, IL		D. Wright										
Sampler												
S. Cooper												
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Voc	SVoc	Total TAC Metals	Total Spgr TAC Metals	Pb / % Silica	Comments
			Date	Time								
18		3011-101-B03(0-1)	2-10-16	1510	2	S	X	X	X	X	X	
19		3011-101-B02(0-1)	2-10-16	1520	2	S	X	X	X	X	X	
20		3011-101-B01(0-1)	2-10-16	1525	2	S	X	X	X	X	X	
21		3011-101-B04(0-1)	2-10-16	1530	2	S	X	X	X	X	X	
22		3011-101-B05(0-1)	2-10-16	1535	2	S	X	X	X	X	X	
2-10-16												

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	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	EE	2-10-16	1615	<i>[Signature]</i>	TA	2/10/16	1615
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>[Signature]</i>	TA	2/10/16	1755	<i>[Signature]</i>	TA-CHEM	2/11/16	0740
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

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

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-7

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
3800 block of Lincoln Highway ISGS #3011-102 (Agricultural Land)

City: St. Charles State: IL Zip Code: 60119

County: Kane Township: St. Charles

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

Latitude: 41.90284237 Longitude: -88.36323806
(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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90284237 Longitude: -88.36323806

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 3011-104-B01 was sampled within the construction zone adjacent to ISGS #3011-102 (Agricultural Land). Refer to PSI Report for ISGS #3011-102 (Agricultural Land) including Table 4-4, and Figure 4-15.

- 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 J107456-10.

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:

3/17/16

Date:



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




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-104 (IDOT Maintenance Facility - St. Charles #129)		Comparison Criteria			
BORING	3011-104-B01		MACs			TACO
SAMPLE	3011-104-B01 (0-1)		Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil					
DEPTH (feet)	0-1					
pH	8.96					
VOCs (None Detected)						
SVOCs (mg/kg)						
2-Methylnaphthalene	0.014	J	--	--	--	--
Anthracene	0.027	J	12,000	--	--	--
Benzo[a]anthracene	0.15		0.9	1.8	1.1	--
Benzo[a]pyrene	0.22	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.34		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.31		--	--	--	--
Benzo[k]fluoranthene	0.13		9	--	--	--
Bis(2-ethylhexyl) phthalate	0.15	J	46	--	--	--
Butyl benzyl phthalate	0.19	J	930	--	--	--
Chrysene	0.22		88	--	--	--
Fluoranthene	0.19		3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.21		0.9	1.6	0.9	--
Naphthalene	0.0082	J	1.8	--	--	--
Phenanthrene	0.13		--	--	--	--
Pyrene	0.55		2,300	--	--	--
Inorganics (mg/kg)						
Arsenic	5.4		11.3	13	--	--
Barium	56		1,500	--	--	--
Beryllium	0.49		22	--	--	--
Boron	5.8		40	--	--	--
Cadmium	0.44		5.2	--	--	--
Calcium	54,000		--	--	--	--
Chromium	15		21	--	--	--
Cobalt	8		20	--	--	--
Copper	22		2,900	--	--	--
Iron	13,000		15,000	15,900	--	--
Lead	220	†	107	--	--	--
Magnesium	25,000		325,000	--	--	--
Manganese	500		630	636	--	--
Nickel	18		100	--	--	--
Potassium	910		--	--	--	--
Selenium	0.49	J	1.3	--	--	--
Silver	0.072	J	4.4	--	--	--
Sodium	2,000		--	--	--	--
Vanadium	18		550	--	--	--
Zinc	120		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	0.26	J	--	--	--	2
Boron	0.08	J	--	--	--	2
Lead	ND	U	--	--	--	0.0075
Manganese	0.56	L	--	--	--	0.15
SPLP Metals (mg/L)						
Manganese	0.22	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: 500-107456-10
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/25/2016 3:51:46 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for
Richard Wright, Senior Project Manager
(708)534-5200
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Job ID: 500-107456-10

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-10

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 3011-104-B01 (0-1) (500-107456-25).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was 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 samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-104-B01 (0-1) (500-107456-25). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323176 and analytical batch 500-323879 contained Chromium above the reporting limit (RL). Associated sample 3011-104-B01 (0-1) (500-107456-25) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0082	J	0.041	0.0063	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.014	J	0.041	0.0075	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.027	J	0.041	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.19		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.55		0.041	0.0081	mg/Kg	1	☼	8270D	Total/NA
Butyl benzyl phthalate	0.19	J	0.21	0.078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.22		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.15	J	0.21	0.075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.34		0.041	0.0088	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.13		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.22		0.041	0.0079	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.21		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.31		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.4		0.60	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.60	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.49		0.24	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	5.8		3.0	0.42	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.44		0.12	0.035	mg/Kg	1	☼	6010B	Total/NA
Calcium	54000	B	120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	15		0.60	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.0		0.30	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	22		0.60	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	220		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000		6.0	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	500		0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	18		0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	910		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.49	J	0.60	0.30	mg/Kg	1	☼	6010B	Total/NA
Silver	0.072	J	0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Sodium	2000		60	7.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.30	0.087	mg/Kg	1	☼	6010B	Total/NA
Zinc	120		1.2	0.38	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.56		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.087	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.96		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-25	3011-104-B01 (0-1)	Solid	02/10/16 15:50	02/11/16 07:40

1

2

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0043	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Benzene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Bromodichloromethane	<0.0055		0.0055	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Bromoform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Bromomethane	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
2-Butanone (MEK)	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Carbon disulfide	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Carbon tetrachloride	<0.0055		0.0055	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chlorobenzene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chloroethane	<0.0055		0.0055	0.0023	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chloroform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chloromethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
cis-1,2-Dichloroethene	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
cis-1,3-Dichloropropene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Dibromochloromethane	<0.0055		0.0055	0.00064	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1-Dichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,2-Dichloroethane	<0.0055		0.0055	0.00082	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1-Dichloroethene	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,2-Dichloropropane	<0.0055		0.0055	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,3-Dichloropropane, Total	<0.0055		0.0055	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Ethylbenzene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
2-Hexanone	<0.0055		0.0055	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Methylene Chloride	<0.0055		0.0055	0.0042	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
4-Methyl-2-pentanone (MIBK)	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Methyl tert-butyl ether	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Styrene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1,2,2-Tetrachloroethane	<0.0055		0.0055	0.00088	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Tetrachloroethene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Toluene	<0.0055		0.0055	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
trans-1,2-Dichloroethene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
trans-1,3-Dichloropropene	<0.0055		0.0055	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1,1-Trichloroethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1,2-Trichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Trichloroethene	<0.0055		0.0055	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Vinyl acetate	<0.0055 *		0.0055	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Vinyl chloride	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/18/16 15:11	1
Dibromofluoromethane	109		75 - 120	02/11/16 08:15	02/18/16 15:11	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/11/16 08:15	02/18/16 15:11	1
Toluene-d8 (Surr)	112		75 - 122	02/11/16 08:15	02/18/16 15:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.061	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachloroethane	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachlorobutadiene	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Naphthalene	0.0082	J	0.041	0.0063	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dichlorophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Methylnaphthalene	0.014	J	0.041	0.0075	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Diethyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
N-Nitrosodiphenylamine	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Phenanthrene	0.13		0.041	0.0057	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Anthracene	0.027	J	0.041	0.0068	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Di-n-butyl phthalate	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Fluoranthene	0.19		0.041	0.0076	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Pyrene	0.55		0.041	0.0081	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Butyl benzyl phthalate	0.19	J	0.21	0.078	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[a]anthracene	0.15		0.041	0.0055	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.22		0.041	0.011	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.057	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Bis(2-ethylhexyl) phthalate	0.15	J	0.21	0.075	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[b]fluoranthene	0.34		0.041	0.0088	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[k]fluoranthene	0.13		0.041	0.012	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[a]pyrene	0.22		0.041	0.0079	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Indeno[1,2,3-cd]pyrene	0.21		0.041	0.011	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0079	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[g,h,i]perylene	0.31		0.041	0.013	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
3 & 4 Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	97		25 - 110	02/12/16 07:27	02/22/16 00:54	1
Phenol-d5	93		31 - 110	02/12/16 07:27	02/22/16 00:54	1
Nitrobenzene-d5	77		25 - 115	02/12/16 07:27	02/22/16 00:54	1
2-Fluorobiphenyl	83		25 - 119	02/12/16 07:27	02/22/16 00:54	1
2,4,6-Tribromophenol	61		35 - 137	02/12/16 07:27	02/22/16 00:54	1
Terphenyl-d14	211	X	36 - 134	02/12/16 07:27	02/22/16 00:54	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Arsenic	5.4		0.60	0.28	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Barium	56		0.60	0.11	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Beryllium	0.49		0.24	0.052	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Boron	5.8		3.0	0.42	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Cadmium	0.44		0.12	0.035	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Calcium	54000	B	120	38	mg/Kg	☼	02/17/16 09:29	02/22/16 13:33	10
Chromium	15		0.60	0.10	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Cobalt	8.0		0.30	0.068	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Copper	22		0.60	0.13	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Iron	13000		12	4.6	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Lead	220		0.30	0.15	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Magnesium	25000		6.0	2.4	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Manganese	500		0.60	0.12	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Nickel	18		0.60	0.16	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Potassium	910		30	4.9	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Selenium	0.49	J	0.60	0.30	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Silver	0.072	J	0.30	0.070	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Sodium	2000		60	7.9	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Thallium	<0.60		0.60	0.29	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Vanadium	18		0.30	0.087	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Zinc	120		1.2	0.38	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	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		02/14/16 08:30	02/17/16 06:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/17/16 06:43	1
Boron	0.080	J	0.50	0.050	mg/L		02/14/16 08:30	02/17/16 06:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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		02/14/16 08:30	02/17/16 06:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/17/16 06:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/17/16 06:43	1
Manganese	0.56		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/17/16 06:43	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Zinc	0.087	J	0.50	0.020	mg/L		02/14/16 08:30	02/17/16 06:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.22		0.025	0.010	mg/L		02/16/16 08:22	02/17/16 12:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/18/16 12:54	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/18/16 12:54	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		02/15/16 13:50	02/16/16 11:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0095	mg/Kg	☼	02/16/16 16:00	02/17/16 19:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.96		0.200	0.200	SU			02/13/16 10:33	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

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.
X	Surrogate is outside control limits
*	ISTD response or retention time outside acceptable limits

Metals

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

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

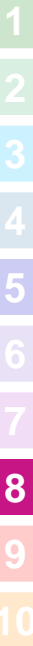
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-10

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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

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

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

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

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

I. Source Location Information

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

Project Name: FAP 347 (IL Route 38) Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
38W 027 IL 38 ISGS #3011-104 (IDOT Maintenance Facility - St. Charles #129)

City: St. Charles State: IL Zip Code: 60175

County: Kane Township: St. Charles

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

Latitude: 41.90289709 Longitude: -88.36214753
(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: See Att. A 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: 847-705-4159

Zip Code: 60196-1096 Phone: 847-705-4159

Contact: Sam Mead

Contact: Sam Mead

Email, if available: Sam.Mead@illinois.gov

Email, if available: Sam.Mead@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 347 (IL Route 38)

Latitude: 41.90289709 Longitude: -88.36214753

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 3011-104-B01 was sampled within the construction zone adjacent to ISGS #3011-104 (IDOT Maintenance Facility - St. Charles #129). Refer to PSI Report for ISGS #3011-104 (IDOT Maintenance Facility - St. Charles #129) including Table 4-4, and Figure 4-15.

- 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 J107456-10.

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

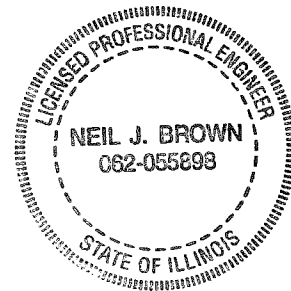
Phone: 312-578-9243

Neil J. Brown

Printed Name:

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

3/17/16
 Date:



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

LPC-663 3011-104 Attachment A

ISGS #3011-104 (IDOT Maintenance Facility - St. Charles #129)

38W 027 IL 38, St. Charles, Kane County, IL 60175

The following BOL numbers are all related the site listed above:

- 0894835123
- 0894835564




Analytical Data Summary

PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-141-15; WorkOrder #08A

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.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.

Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- * = Concentration exceeds the MAC for Chicago corporate limits.
- 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 the most stringent MAC and the MAC for Chicago corporate limits.
-  = Concentration exceeds applicable comparison criteria.

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-104 (IDOT Maintenance Facility - St. Charles #129)		Comparison Criteria			
BORING	3011-104-B01		MACs			TACO
SAMPLE	3011-104-B01 (0-1)		Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil					
DEPTH (feet)	0-1					
pH	8.96					
VOCs (None Detected)						
SVOCs (mg/kg)						
2-Methylnaphthalene	0.014	J	--	--	--	--
Anthracene	0.027	J	12,000	--	--	--
Benzo[a]anthracene	0.15		0.9	1.8	1.1	--
Benzo[a]pyrene	0.22	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	0.34		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	0.31		--	--	--	--
Benzo[k]fluoranthene	0.13		9	--	--	--
Bis(2-ethylhexyl) phthalate	0.15	J	46	--	--	--
Butyl benzyl phthalate	0.19	J	930	--	--	--
Chrysene	0.22		88	--	--	--
Fluoranthene	0.19		3,100	--	--	--
Indeno[1,2,3-cd]pyrene	0.21		0.9	1.6	0.9	--
Naphthalene	0.0082	J	1.8	--	--	--
Phenanthrene	0.13		--	--	--	--
Pyrene	0.55		2,300	--	--	--
Inorganics (mg/kg)						
Arsenic	5.4		11.3	13	--	--
Barium	56		1,500	--	--	--
Beryllium	0.49		22	--	--	--
Boron	5.8		40	--	--	--
Cadmium	0.44		5.2	--	--	--
Calcium	54,000		--	--	--	--
Chromium	15		21	--	--	--
Cobalt	8		20	--	--	--
Copper	22		2,900	--	--	--
Iron	13,000		15,000	15,900	--	--
Lead	220	†	107	--	--	--
Magnesium	25,000		325,000	--	--	--
Manganese	500		630	636	--	--
Nickel	18		100	--	--	--
Potassium	910		--	--	--	--
Selenium	0.49	J	1.3	--	--	--
Silver	0.072	J	4.4	--	--	--
Sodium	2,000		--	--	--	--
Vanadium	18		550	--	--	--
Zinc	120		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	0.26	J	--	--	--	2
Boron	0.08	J	--	--	--	2
Lead	ND	U	--	--	--	0.0075
Manganese	0.56	L	--	--	--	0.15
SPLP Metals (mg/L)						
Manganese	0.22	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: 500-107456-10
Client Project/Site: IDOT - IL 38 - WO 008

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

Attn: Mr. Dean Tiebout

Jodie Bracken

Authorized for release by:
2/25/2016 3:51:46 PM
Jodie Bracken, Project Management Assistant II
jodie.bracken@testamericainc.com

Designee for
Richard Wright, Senior Project Manager
(708)534-5200
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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Job ID: 500-107456-10

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-107456-10

Comments

No additional comments.

Receipt

The samples were received on 2/11/2016 7:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4° C, 2.8° C and 3.3° C.

GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323326 recovered above the upper control limit for Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 3011-104-B01 (0-1) (500-107456-25).

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-323326 recovered outside control limits for the following analyte: Vinyl Acetate. This analyte was biased high in the LCS/LCSD and was 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 samples contained one acid surrogate and/or base/neutral surrogate outside acceptance limits: 3011-104-B01 (0-1) (500-107456-25). The laboratory's SOP allows one acid and/or base/neutral surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

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

Metals

Method(s) 6010B: The method blank for preparation batch 500-323176 and analytical batch 500-323879 contained Chromium above the reporting limit (RL). Associated sample 3011-104-B01 (0-1) (500-107456-25) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

General Chemistry

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

Organic Prep

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0082	J	0.041	0.0063	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.014	J	0.041	0.0075	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.027	J	0.041	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.19		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.55		0.041	0.0081	mg/Kg	1	☼	8270D	Total/NA
Butyl benzyl phthalate	0.19	J	0.21	0.078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.22		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.15	J	0.21	0.075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.34		0.041	0.0088	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.13		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.22		0.041	0.0079	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.21		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.31		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.4		0.60	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.60	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.49		0.24	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	5.8		3.0	0.42	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.44		0.12	0.035	mg/Kg	1	☼	6010B	Total/NA
Calcium	54000	B	120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	15		0.60	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.0		0.30	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	22		0.60	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	220		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000		6.0	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	500		0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	18		0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	910		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.49	J	0.60	0.30	mg/Kg	1	☼	6010B	Total/NA
Silver	0.072	J	0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Sodium	2000		60	7.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.30	0.087	mg/Kg	1	☼	6010B	Total/NA
Zinc	120		1.2	0.38	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.56		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.087	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.96		0.200	0.200	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 - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107456-25	3011-104-B01 (0-1)	Solid	02/10/16 15:50	02/11/16 07:40

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Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0043	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Benzene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Bromodichloromethane	<0.0055		0.0055	0.00093	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Bromoform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Bromomethane	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
2-Butanone (MEK)	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Carbon disulfide	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Carbon tetrachloride	<0.0055		0.0055	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chlorobenzene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chloroethane	<0.0055		0.0055	0.0023	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chloroform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Chloromethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
cis-1,2-Dichloroethene	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
cis-1,3-Dichloropropene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Dibromochloromethane	<0.0055		0.0055	0.00064	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1-Dichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,2-Dichloroethane	<0.0055		0.0055	0.00082	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1-Dichloroethene	<0.0055		0.0055	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,2-Dichloropropane	<0.0055		0.0055	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,3-Dichloropropene, Total	<0.0055		0.0055	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Ethylbenzene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
2-Hexanone	<0.0055		0.0055	0.0017	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Methylene Chloride	<0.0055		0.0055	0.0042	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
4-Methyl-2-pentanone (MIBK)	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Methyl tert-butyl ether	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Styrene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1,2,2-Tetrachloroethane	<0.0055		0.0055	0.00088	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Tetrachloroethene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Toluene	<0.0055		0.0055	0.0019	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
trans-1,2-Dichloroethene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
trans-1,3-Dichloropropene	<0.0055		0.0055	0.0016	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1,1-Trichloroethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
1,1,2-Trichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Trichloroethene	<0.0055		0.0055	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Vinyl acetate	<0.0055 *		0.0055	0.0015	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Vinyl chloride	<0.0055		0.0055	0.0013	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/11/16 08:15	02/18/16 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 122	02/11/16 08:15	02/18/16 15:11	1
Dibromofluoromethane	109		75 - 120	02/11/16 08:15	02/18/16 15:11	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	02/11/16 08:15	02/18/16 15:11	1
Toluene-d8 (Surr)	112		75 - 122	02/11/16 08:15	02/18/16 15:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.091	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.061	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachloroethane	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachlorobutadiene	<0.21		0.21	0.064	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Naphthalene	0.0082	J	0.041	0.0063	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dichlorophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4,5-Trichlorophenol	<0.41		0.41	0.094	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Methylnaphthalene	0.014	J	0.041	0.0075	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,6-Dinitrotoluene	<0.21		0.21	0.081	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Dimethyl phthalate	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Acenaphthylene	<0.041		0.041	0.0054	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Acenaphthene	<0.041		0.041	0.0074	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Diethyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
N-Nitrosodiphenylamine	<0.21		0.21	0.048	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Phenanthrene	0.13		0.041	0.0057	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Anthracene	0.027	J	0.041	0.0068	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Di-n-butyl phthalate	<0.21		0.21	0.062	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Fluoranthene	0.19		0.041	0.0076	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Pyrene	0.55		0.041	0.0081	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Butyl benzyl phthalate	0.19	J	0.21	0.078	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[a]anthracene	0.15		0.041	0.0055	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.22		0.041	0.011	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.057	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Bis(2-ethylhexyl) phthalate	0.15	J	0.21	0.075	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[b]fluoranthene	0.34		0.041	0.0088	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[k]fluoranthene	0.13		0.041	0.012	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[a]pyrene	0.22		0.041	0.0079	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Indeno[1,2,3-cd]pyrene	0.21		0.041	0.011	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Dibenz(a,h)anthracene	<0.041		0.041	0.0079	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
Benzo[g,h,i]perylene	0.31		0.041	0.013	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1
3 & 4 Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	02/12/16 07:27	02/22/16 00:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	97		25 - 110	02/12/16 07:27	02/22/16 00:54	1
Phenol-d5	93		31 - 110	02/12/16 07:27	02/22/16 00:54	1
Nitrobenzene-d5	77		25 - 115	02/12/16 07:27	02/22/16 00:54	1
2-Fluorobiphenyl	83		25 - 119	02/12/16 07:27	02/22/16 00:54	1
2,4,6-Tribromophenol	61		35 - 137	02/12/16 07:27	02/22/16 00:54	1
Terphenyl-d14	211	X	36 - 134	02/12/16 07:27	02/22/16 00:54	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.25	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Arsenic	5.4		0.60	0.28	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Barium	56		0.60	0.11	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Beryllium	0.49		0.24	0.052	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Boron	5.8		3.0	0.42	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Cadmium	0.44		0.12	0.035	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Calcium	54000	B	120	38	mg/Kg	☼	02/17/16 09:29	02/22/16 13:33	10
Chromium	15		0.60	0.10	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Cobalt	8.0		0.30	0.068	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Copper	22		0.60	0.13	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Iron	13000		12	4.6	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Lead	220		0.30	0.15	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Magnesium	25000		6.0	2.4	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Manganese	500		0.60	0.12	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Nickel	18		0.60	0.16	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Potassium	910		30	4.9	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Selenium	0.49	J	0.60	0.30	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Silver	0.072	J	0.30	0.070	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Sodium	2000		60	7.9	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Thallium	<0.60		0.60	0.29	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Vanadium	18		0.30	0.087	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	1
Zinc	120		1.2	0.38	mg/Kg	☼	02/17/16 09:29	02/20/16 22:00	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		02/14/16 08:30	02/17/16 06:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/14/16 08:30	02/17/16 06:43	1
Boron	0.080	J	0.50	0.050	mg/L		02/14/16 08:30	02/17/16 06:43	1

TestAmerica Chicago

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

Client Sample ID: 3011-104-B01 (0-1)

Lab Sample ID: 500-107456-25

Date Collected: 02/10/16 15:50

Matrix: Solid

Date Received: 02/11/16 07:40

Percent Solids: 79.2

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		02/14/16 08:30	02/17/16 06:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Cobalt	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Iron	<0.40		0.40	0.20	mg/L		02/14/16 08:30	02/17/16 06:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/14/16 08:30	02/17/16 06:43	1
Manganese	0.56		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Nickel	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/14/16 08:30	02/17/16 06:43	1
Silver	<0.025		0.025	0.010	mg/L		02/14/16 08:30	02/17/16 06:43	1
Zinc	0.087	J	0.50	0.020	mg/L		02/14/16 08:30	02/17/16 06:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.22		0.025	0.010	mg/L		02/16/16 08:22	02/17/16 12:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/14/16 08:30	02/18/16 12:54	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/14/16 08:30	02/18/16 12:54	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		02/15/16 13:50	02/16/16 11:41	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0095	mg/Kg	☼	02/16/16 16:00	02/17/16 19:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.96		0.200	0.200	SU			02/13/16 10:33	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

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.
X	Surrogate is outside control limits
*	ISTD response or retention time outside acceptable limits

Metals

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

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - IL 38 - WO 008

TestAmerica Job ID: 500-107456-10

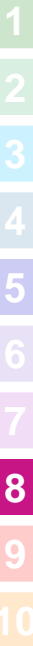
Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-16

The following analytes are included in this report, but 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
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107456-10

Login Number: 107456

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8,3.3,2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

