Illinois Environmental Protection Agency

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, incldluding number and street):

48W 580 IL 38 ISGS #3011-19 (Residence)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89459272 (Decimal Degrees) Longitude: -88.55826786 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.897307 Longitude: -88.597361

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 #3011-3 (Agricultural land). Refer to PSI Report for ISGS #3011-3 (Agricultural land) including Table 4-4, and Figures 4-1A&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 J107703-1, J107703-2, and J107703-3.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055893
STATE OF ILLINOIS

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 #3011-19 (Residence)	Comparison Criteria			
BORING	3011-19-B01	MACs			TACO
SAMPLE	3011-19-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.42				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.013 J**	12,000	--	--	--
Benzo[a]anthracene	**0.061**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.075**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.12**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.069**	--	--	--	--
Benzo[k]fluoranthene	**0.033 J**	9	--	--	--
Chrysene	**0.08**	88	--	--	--
Fluoranthene	**0.082**	3,100	--	--	--
Phenanthrene	**0.056**	--	--	--	--
Pyrene	**0.2**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.23 J**	5	--	--	--
Arsenic	**3**	11.3	13	--	--
Barium	**29**	1,500	--	--	--
Beryllium	**0.3**	22	--	--	--
Boron	**5.9**	40	--	--	--
Cadmium	**0.11**	5.2	--	--	--
Calcium	**190,000**	--	--	--	--
Chromium	**8.5**	21	--	--	--
Cobalt	**3.8**	20	--	--	--
Copper	**8.2**	2,900	--	--	--
Iron	**6,300**	15,000	15,900	--	--
Lead	**51**	107	--	--	--
Magnesium	**120,000**	325,000	--	--	--
Manganese	**250**	630	636	--	--
Mercury	**0.021**	0.89	--	--	--
Nickel	**7.7**	100	--	--	--
Potassium	**570**	--	--	--	--
Sodium	**900**	--	--	--	--
Vanadium	**11**	550	--	--	--
Zinc	**54**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.39 J**	--	--	--	2
Boron	**0.37 J**	--	--	--	2
Manganese	**0.98 L**	--	--	--	0.15
Zinc	**0.54**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.86 L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-18 (Agricultural Land)		Comparison Criteria			
BORING	3011-18-B02		MACs			TACO
SAMPLE	3011-18-B02 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.21					
VOCs (mg/kg)						
2-Butanone (MEK)	**0.0084**		--	--	--	--
Acetone	**0.038**		25	--	--	--
SVOCs (mg/kg)						
Acenaphthylene	ND	U	--	--	--	--
Anthracene	**0.0083**	**J**	12,000	--	--	--
Benzo[a]anthracene	**0.047**		0.9	1.8	1.1	--
Benzo[a]pyrene	**0.094**	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.16**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.085**		--	--	--	--
Benzo[k]fluoranthene	**0.058**		9	--	--	--
Chrysene	**0.079**		88	--	--	--
Dibenzo(a,h)anthracene	ND	U	0.09	0.42	0.2	--
Fluoranthene	**0.095**		3,100	--	--	--
Fluorene	ND	U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.054**		0.9	1.6	0.9	--
Phenanthrene	**0.039**		--	--	--	--
Pyrene	**0.16**		2,300	--	--	--
Inorganics (mg/kg)						
Antimony	ND	U	5	--	--	--
Arsenic	**3.9**		11.3	13	--	--
Barium	**42**		1,500	--	--	--
Beryllium	**0.39**		22	--	--	--
Boron	**5.2**		40	--	--	--
Cadmium	**0.19**		5.2	--	--	--
Calcium	**110,000**		--	--	--	--
Chromium	**11**		21	--	--	--
Cobalt	**5.2**		20	--	--	--
Copper	**13**		2,900	--	--	--
Iron	**10,000**		15,000	15,900	--	--
Lead	**77**		107	--	--	--
Magnesium	**46,000**		325,000	--	--	--
Manganese	**300**		630	636	--	--
Mercury	**0.013**	**J**	0.89	--	--	--
Nickel	**13**		100	--	--	--
Potassium	**660**		--	--	--	--
Selenium	ND	U	1.3	--	--	--
Sodium	**1,200**		--	--	--	--
Vanadium	**15**		550	--	--	--
Zinc	**68**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.48**	**J**	--	--	--	2
Boron	**0.47**	**J**	--	--	--	2
Chromium	ND	U	--	--	--	0.1
Cobalt	ND	U	--	--	--	1
Lead	**0.011**	**L**	--	--	--	0.0075
Manganese	**4**	**L**	--	--	--	0.15
Nickel	**0.012**	**J**	--	--	--	0.1
Zinc	**0.17**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Lead	**0.23**	**L**	--	--	--	0.0075
Manganese	**0.63**	**L**	--	--	--	0.15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-107641-3
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:
3/1/2016 5:24:43 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-3

Job ID: 500-107641-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-3

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323872: 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 associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-18-B01 (0-1) (500-107641-9), 3011-18-B05 (0-1) (500-107641-12), 3011-18-B07 (0-1) (500-107641-13), 3011-18-B10 (0-1) (500-107641-15), 3011-18-B11 (0-1) (500-107641-16), (500-107641-E-1-D MS) and (500-107641-E-1-E 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 500-324170 and analytical batch 500-324562 contained 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) 6020A: The continuing calibration verification (CCV) associated with batch 500-324078, at lines 88 and 92 recovered above the upper control limit for Thallium. The affected samples were 500-107641-11 through 20. Also the CCVL at line 94 was outside the upper control limit for Thallium. The samples associated with these CCV and CCVL were non-detects for the affected analytes, therefore the samples were 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.

Client Sample ID: 3011-18-B02 (0-1)

Lab Sample ID: 500-107641-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.038		0.016	0.0032	mg/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	0.0084		0.0041	0.0015	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.039		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0083	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.095		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.16		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.047		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.079		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.058		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.094		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.054		0.038	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.085		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.9		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	42		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.39		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	5.2		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.19		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	10000	B	11	4.3	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-18-B02 (0-1) (Continued)

Lab Sample ID: 500-107641-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	77		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	46000	B	5.5	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	300		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	660		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	1200		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	68		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.48	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.47	J	0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.011		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	4.0		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.17	J B	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.23		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.63		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	8.21		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-8	3011-18-B02 (0-1)	Solid	02/16/16 11:45	02/17/16 07:45

Client Sample ID: 3011-18-B02 (0-1)
Date Collected: 02/16/16 11:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-8
Matrix: Solid
Percent Solids: 86.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.038**		0.016	0.0032	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Benzene	<0.0041		0.0041	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Bromodichloromethane	<0.0041		0.0041	0.00069	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Bromoform	<0.0041		0.0041	0.00084	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
2-Butanone (MEK)	**0.0084**		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Carbon disulfide	<0.0041		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Carbon tetrachloride	<0.0041		0.0041	0.00088	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Chlorobenzene	<0.0041		0.0041	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Chloroethane	<0.0041		0.0041	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Chloroform	<0.0041		0.0041	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Chloromethane	<0.0041		0.0041	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
cis-1,2-Dichloroethene	<0.0041		0.0041	0.00084	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
cis-1,3-Dichloropropene	<0.0041		0.0041	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Dibromochloromethane	<0.0041		0.0041	0.00047	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,1-Dichloroethane	<0.0041		0.0041	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,2-Dichloroethane	<0.0041		0.0041	0.00061	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,1-Dichloroethene	<0.0041		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,2-Dichloropropane	<0.0041		0.0041	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,3-Dichloropropene, Total	<0.0041		0.0041	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Ethylbenzene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Methylene Chloride	<0.0041		0.0041	0.0031	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Methyl tert-butyl ether	<0.0041		0.0041	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Styrene	<0.0041		0.0041	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,1,2,2-Tetrachloroethane	<0.0041		0.0041	0.00065	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Tetrachloroethene	<0.0041		0.0041	0.00086	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Toluene	<0.0041		0.0041	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
trans-1,2-Dichloroethene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
trans-1,3-Dichloropropene	<0.0041		0.0041	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,1,1-Trichloroethane	<0.0041		0.0041	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
1,1,2-Trichloroethane	<0.0041		0.0041	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Trichloroethene	<0.0041		0.0041	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Vinyl acetate	<0.0041		0.0041	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Vinyl chloride	<0.0041		0.0041	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1
Xylenes, Total	<0.0082		0.0082	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 10:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 122*	*02/17/16 08:40*	*02/23/16 10:31*	*1*
Dibromofluoromethane	*105*		*75 - 120*	*02/17/16 08:40*	*02/23/16 10:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 134*	*02/17/16 08:40*	*02/23/16 10:31*	*1*
Toluene-d8 (Surr)	*110*		*75 - 122*	*02/17/16 08:40*	*02/23/16 10:31*	*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	☼	02/22/16 06:59	03/01/16 00:21	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1

Client Sample ID: 3011-18-B02 (0-1)
Date Collected: 02/16/16 11:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-8
Matrix: Solid
Percent Solids: 86.0

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	☼	02/22/16 06:59	03/01/16 00:21	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Hexachlorobenzene	<0.077		0.077	0.0089	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Phenanthrene	**0.039**		0.038	0.0053	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Anthracene	**0.0083**	**J**	0.038	0.0064	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Fluoranthene	**0.095**		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Pyrene	**0.16**		0.038	0.0076	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Benzo[a]anthracene	**0.047**		0.038	0.0051	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1

Client Sample ID: 3011-18-B02 (0-1)
Date Collected: 02/16/16 11:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-8
Matrix: Solid
Percent Solids: 86.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.079**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Benzo[b]fluoranthene	**0.16**		0.038	0.0082	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Benzo[k]fluoranthene	**0.058**		0.038	0.011	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Benzo[a]pyrene	**0.094**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Indeno[1,2,3-cd]pyrene	**0.054**		0.038	0.0099	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
Benzo[g,h,i]perylene	**0.085**		0.038	0.012	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	03/01/16 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/22/16 06:59*	*03/01/16 00:21*	*1*
Phenol-d5	*80*		*31 - 110*	*02/22/16 06:59*	*03/01/16 00:21*	*1*
Nitrobenzene-d5	*67*		*25 - 115*	*02/22/16 06:59*	*03/01/16 00:21*	*1*
2-Fluorobiphenyl	*70*		*25 - 119*	*02/22/16 06:59*	*03/01/16 00:21*	*1*
2,4,6-Tribromophenol	*73*		*35 - 137*	*02/22/16 06:59*	*03/01/16 00:21*	*1*
Terphenyl-d14	*129*		*36 - 134*	*02/22/16 06:59*	*03/01/16 00:21*	*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	☼	02/23/16 16:44	02/26/16 03:25	1
Arsenic	**3.9**		0.55	0.26	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Barium	**42**		0.55	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Beryllium	**0.39**		0.22	0.048	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Boron	**5.2**		2.8	0.39	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Cadmium	**0.19**		0.11	0.032	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Calcium	**110000**	**B**	110	36	mg/Kg	☼	02/23/16 16:44	02/26/16 05:32	10
Chromium	**11**	**B**	0.55	0.095	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Cobalt	**5.2**		0.28	0.063	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Copper	**13**		0.55	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Iron	**10000**	**B**	11	4.3	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Lead	**77**		0.28	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Magnesium	**46000**	**B**	5.5	2.3	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Manganese	**300**		0.55	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Nickel	**13**		0.55	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Potassium	**660**		28	4.5	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Sodium	**1200**		55	7.3	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Vanadium	**15**		0.28	0.081	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1
Zinc	**68**		1.1	0.35	mg/Kg	☼	02/23/16 16:44	02/26/16 03:25	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.48**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 21:01	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 21:01	1
Boron	**0.47**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 21:01	1

Client Sample ID: 3011-18-B02 (0-1)
Date Collected: 02/16/16 11:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-8
Matrix: Solid
Percent Solids: 86.0

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		02/21/16 16:00	02/23/16 21:01	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:01	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:01	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 21:01	1
Lead	**0.011**		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 21:01	1
Manganese	**4.0**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:01	1
Nickel	**0.012**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:01	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 21:01	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:01	1
Zinc	**0.17**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 21:01	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.23**		0.0075	0.0075	mg/L		02/23/16 09:20	02/25/16 03:44	1
Manganese	**0.63**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 03:44	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		02/21/16 16:00	02/22/16 19:41	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 19:41	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 11:09	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	☼	02/23/16 15:15	02/24/16 12:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.21**		0.200	0.200	SU			02/19/16 17:53	1

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
^	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.
¤	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: 500-107641-3

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)	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 #: 500-107641

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0018.01
Project Name: IC 38
Project Location/State: Kane County, IL
Lab Project #: 500116E4
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total Metals	TCLP/SPLP Metals	pH/% Solids					Comments
5		3011-18-B308 (0-1)	2/16/16	1130	2	S	X	X	X	X	X					
6		3011-18-B306 (0-1)	2-16-16	1135	2	S	X	X	X	X	X					
7		3011-18-B304 (0-1)	2/16/16	1140	2	S	X	X	X	X	X					
8		3011-18-B302 (0-1)	2/16/16	1145	2	S	X	X	X	X	X					
9		3011-18-B01 (0-1)	2/16/16	1250	2	S	X	X	X	X	X					
10		3011-18-B01 (0-1) D	2/16/16	1258	2	S	X	X	X	X	X					
11		3011-18-B303 (0-1)	2/16/16	1305	2	S	X	X	X	X	X					
12		3011-18-B305 (0-1)	2/16/16	1310	2	S	X	X	X	X	X					
13		3011-18-B307 (0-1)	2-16-16	1325	2	S	X	X	X	X	X					
14		3011-18-B309 (0-1)	2/16/16	1330	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
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
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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:

TAL-4124-500 (1209)

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 #: 500-107641
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 100 9741-0008.01
Project Name: IL 78
Project Location/State: Kane County, IL
Lab Project #: 500118114
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL Metals	TCLP/SPLP TAL Metals	pH/% Solids	Comments
15		Soil-78-B10 (0-1)	2-16-16	1340	2	S	X	X	X	X	X	
16		Soil-78-B11 (0-1)	2-16-16	1350	2	S	X	X	X	X	X	

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
H. Neal	TA	2/16/16	1715	Shane Scott	TA-CHI	2/17/16	0948

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:

3/1/2016

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107641-3

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107641-4
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:
3/1/2016 5:25:21 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

Table of Contents

Job ID: 500-107641-4

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-4

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-19-B01 (0-1) (500-107641-17), (500-107641-E-1-D MS) and (500-107641-E-1-E 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 500-324170 and analytical batch 500-324562 contained 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.

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: 500-107641-4

Client Sample ID: 3011-19-B01 (0-1)

Lab Sample ID: 500-107641-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.056		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.082		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.061		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.080		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.033	J	0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.075		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.069		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.23	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.0		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	29		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	5.9		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.11		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	190000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.5	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.8		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	8.2		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	6300	B	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	51		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	120000	B	56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	250		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.7		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	570		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	900		56	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.37	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.98		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.54	B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.86		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.021		0.019	0.0099	mg/Kg	1	☼	7471B	Total/NA
pH	8.42		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-17	3011-19-B01 (0-1)	Solid	02/16/16 12:00	02/17/16 07:45

Client Sample ID: 3011-19-B01 (0-1)
Date Collected: 02/16/16 12:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-17
Matrix: Solid
Percent Solids: 86.4

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	☼	02/17/16 08:40	02/23/16 12:12	1
Benzene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Bromodichloromethane	<0.0051		0.0051	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Bromoform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Bromomethane	<0.0051		0.0051	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
2-Butanone (MEK)	<0.0051		0.0051	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Carbon disulfide	<0.0051		0.0051	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Carbon tetrachloride	<0.0051		0.0051	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Chlorobenzene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Chloroethane	<0.0051		0.0051	0.0021	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Chloroform	<0.0051		0.0051	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Chloromethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
cis-1,2-Dichloroethene	<0.0051		0.0051	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
cis-1,3-Dichloropropene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Dibromochloromethane	<0.0051		0.0051	0.00058	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,1-Dichloroethane	<0.0051		0.0051	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,2-Dichloroethane	<0.0051		0.0051	0.00075	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,1-Dichloroethene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,2-Dichloropropane	<0.0051		0.0051	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,3-Dichloropropene, Total	<0.0051		0.0051	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Ethylbenzene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Methylene Chloride	<0.0051		0.0051	0.0038	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Methyl tert-butyl ether	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Styrene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,1,2,2-Tetrachloroethane	<0.0051		0.0051	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Tetrachloroethene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Toluene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
trans-1,2-Dichloroethene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
trans-1,3-Dichloropropene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,1,1-Trichloroethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
1,1,2-Trichloroethane	<0.0051		0.0051	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Trichloroethene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Vinyl acetate	<0.0051		0.0051	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Vinyl chloride	<0.0051		0.0051	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 122*	*02/17/16 08:40*	*02/23/16 12:12*	*1*
Dibromofluoromethane	*108*		*75 - 120*	*02/17/16 08:40*	*02/23/16 12:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 134*	*02/17/16 08:40*	*02/23/16 12:12*	*1*
Toluene-d8 (Surr)	*109*		*75 - 122*	*02/17/16 08:40*	*02/23/16 12:12*	*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	☼	02/22/16 06:59	02/28/16 19:08	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1

Client Sample ID: 3011-19-B01 (0-1)
Date Collected: 02/16/16 12:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-17
Matrix: Solid
Percent Solids: 86.4

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	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Fluorene	<0.038		0.038	0.0053	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Phenanthrene	**0.056**		0.038	0.0053	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Anthracene	**0.013**	**J**	0.038	0.0064	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Fluoranthene	**0.082**		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Pyrene	**0.20**		0.038	0.0076	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Benzo[a]anthracene	**0.061**		0.038	0.0051	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1

Client Sample ID: 3011-19-B01 (0-1)
Date Collected: 02/16/16 12:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-17
Matrix: Solid
Percent Solids: 86.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.080**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Benzo[b]fluoranthene	**0.12**		0.038	0.0082	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Benzo[k]fluoranthene	**0.033**	**J**	0.038	0.011	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Benzo[a]pyrene	**0.075**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Indeno[1,2,3-cd]pyrene	<0.038		0.038	0.0099	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0073	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
Benzo[g,h,i]perylene	**0.069**		0.038	0.012	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 06:59	02/28/16 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*75*		*25 - 110*	*02/22/16 06:59*	*02/28/16 19:08*	*1*
Phenol-d5	*71*		*31 - 110*	*02/22/16 06:59*	*02/28/16 19:08*	*1*
Nitrobenzene-d5	*67*		*25 - 115*	*02/22/16 06:59*	*02/28/16 19:08*	*1*
2-Fluorobiphenyl	*74*		*25 - 119*	*02/22/16 06:59*	*02/28/16 19:08*	*1*
2,4,6-Tribromophenol	*82*		*35 - 137*	*02/22/16 06:59*	*02/28/16 19:08*	*1*
Terphenyl-d14	*201*	*X*	*36 - 134*	*02/22/16 06:59*	*02/28/16 19:08*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.23**	**J**	1.1	0.23	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Arsenic	**3.0**		0.56	0.26	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Barium	**29**		0.56	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Beryllium	**0.30**		0.22	0.048	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Boron	**5.9**		2.8	0.39	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Cadmium	**0.11**		0.11	0.032	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Calcium	**190000**	**B**	110	36	mg/Kg	☼	02/23/16 16:44	02/26/16 06:17	10
Chromium	**8.5**	**B**	0.56	0.096	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Cobalt	**3.8**		0.28	0.063	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Copper	**8.2**		0.56	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Iron	**6300**	**B**	11	4.3	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Lead	**51**		0.28	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Magnesium	**120000**	**B**	56	23	mg/Kg	☼	02/23/16 16:44	02/26/16 06:17	10
Manganese	**250**		0.56	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Nickel	**7.7**		0.56	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Potassium	**570**		28	4.5	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Sodium	**900**		56	7.3	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Thallium	<0.56		0.56	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Vanadium	**11**		0.28	0.081	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	1
Zinc	**54**		1.1	0.35	mg/Kg	☼	02/23/16 16:44	02/26/16 04:19	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		02/21/16 16:00	02/23/16 22:38	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 22:38	1
Boron	**0.37**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:38	1

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

TestAmerica Job ID: 500-107641-4

Client Sample ID: 3011-19-B01 (0-1)
Date Collected: 02/16/16 12:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-17
Matrix: Solid
Percent Solids: 86.4

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		02/21/16 16:00	02/23/16 22:38	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:38	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:38	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 22:38	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 22:38	1
Manganese	**0.98**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:38	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:38	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 22:38	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:38	1
Zinc	**0.54**	**B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 22:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.86**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 05:00	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		02/21/16 16:00	02/22/16 20:39	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 20:39	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		02/22/16 15:15	02/23/16 11:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.021**		0.019	0.0099	mg/Kg	☼	02/23/16 15:15	02/24/16 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.42**		0.200	0.200	SU			02/19/16 19:32	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-4

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
^	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.
¤	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: 500-107641-4

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 #: 500-107641

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE	Client Project #: 1009341.0005.01
Project Name: IL 38	
Project Location/State: Kane County IL	Lab Project #: 50011864
Sampler: S. Cooper	Lab PM: D. Wi..M

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Voc	Svoc	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
17		Soil-14-Bal (01)	2/16/16	1200	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Shawn Scott	TA-Chi	2/17/16	0745

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: 500-107641-4

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, incldluding number and street):

48W 607 IL 38 ISGS #3011-20 (Farmstead)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: _____

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

Latitude: 41.89446844 (Decimal Degrees) Longitude: -88.55787308 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89446844 Longitude: -88.55787308

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 3011-20-B01, 3011-18-B01, and 3011-18-B03 was sampled within the construction zone adjacent to ISGS #3011-20 (Farmstead). Refer to PSI Report for ISGS #3011-20 (Farmstead) including Table 4-4, and Figures 4-3A&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 J107641-5 and J107641-3.

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:

3/17/14
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-20 (Farmstead)	Comparison Criteria			
BORING	3011-20-B01	MACs			TACO
SAMPLE	3011-20-B01 (0-1)	Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil				
DEPTH (feet)	0-1				
pH	8.21				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.0092 J**	12,000	--	--	--
Benzo[a]anthracene	**0.037**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.065**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.094**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.082**	--	--	--	--
Benzo[k]fluoranthene	**0.039**	9	--	--	--
Chrysene	**0.06**	88	--	--	--
Fluoranthene	**0.055**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.063**	0.9	1.6	0.9	--
Phenanthrene	**0.037**	--	--	--	--
Pyrene	**0.13**	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	**2.4**	11.3	13	--	--
Barium	**18**	1,500	--	--	--
Beryllium	**0.2**	22	--	--	--
Boron	**10**	40	--	--	--
Calcium	**190,000**	--	--	--	--
Chromium	**5.7**	21	--	--	--
Cobalt	**3.1**	20	--	--	--
Copper	**7.9**	2,900	--	--	--
Iron	**6,200**	15,000	15,900	--	--
Lead	**11**	107	--	--	--
Magnesium	**110,000**	325,000	--	--	--
Manganese	**270**	630	636	--	--
Nickel	**7.3**	100	--	--	--
Potassium	**600**	--	--	--	--
Sodium	**590**	--	--	--	--
Vanadium	**8.6**	550	--	--	--
Zinc	**23**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.26 J**	--	--	--	2
Boron	**0.35 J**	--	--	--	2
Manganese	**2.3 L**	--	--	--	0.15
Nickel	**0.013 J**	--	--	--	0.1
Zinc	**0.84**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.039**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-18 (Agricultural Land)			Comparison Criteria			
BORING	3011-18-B01		3011-18-B03	MACs			TACO
SAMPLE	3011-18-B01 (0-1)	3011-18-B01 (0-1)D	3011-18-B03 (0-1)				
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.42	8.51	8.44				
VOCs (mg/kg)							
2-Butanone (MEK)	ND U	ND U	ND U	--	--	--	--
Acetone	ND U	ND U	ND U	25	--	--	--
SVOCs (mg/kg)							
Acenaphthylene	ND U	ND U	**0.0057 J**	--	--	--	--
Anthracene	ND U	ND U	**0.0072 J**	12,000	--	--	--
Benzo[a]anthracene	**0.041**	**0.032 J**	**0.04**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.069**	**0.039**	**0.046**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.097**	**0.077**	**0.093**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.043**	**0.024 J**	**0.022 J**	--	--	--	--
Benzo[k]fluoranthene	**0.05**	**0.025 J**	**0.03 J**	9	--	--	--
Chrysene	**0.053**	**0.042**	**0.054**	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	ND U	0.09	0.42	0.2	--
Fluoranthene	**0.059**	**0.073**	**0.084**	3,100	--	--	--
Fluorene	ND U	ND U	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	ND U	**0.022 J**	**0.022 J**	0.9	1.6	0.9	--
Phenanthrene	**0.033 J**	**0.026 J**	**0.042**	--	--	--	--
Pyrene	**0.12**	**0.088**	**0.11**	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	ND U	ND U	ND U	5	--	--	--
Arsenic	**4.7**	**3**	**3.3**	11.3	13	--	--
Barium	**38**	**25**	**47**	1,500	--	--	--
Beryllium	**0.35**	**0.25**	**0.33**	22	--	--	--
Boron	**6.6**	**6.3**	**6.9**	40	--	--	--
Cadmium	**0.18**	**0.18**	**0.15**	5.2	--	--	--
Calcium	**110,000**	**150,000**	**110,000**	--	--	--	--
Chromium	**10**	**8.3**	**8.6**	21	--	--	--
Cobalt	**5.5**	**4.1**	**4.5**	20	--	--	--
Copper	**13**	**12**	**12**	2,900	--	--	--
Iron	**9,000**	**7,800**	**8,500**	15,000	15,900	--	--
Lead	**76**	**68**	**42**	107	--	--	--
Magnesium	**53,000**	**88,000**	**51,000**	325,000	--	--	--
Manganese	**370**	**330**	**320**	630	636	--	--
Mercury	**0.017 J**	**0.016 J**	**0.019**	0.89	--	--	--
Nickel	**12**	**9.1**	**10**	100	--	--	--
Potassium	**700**	**510**	**640**	--	--	--	--
Selenium	ND U	ND U	ND U	1.3	--	--	--
Sodium	**1,300**	**1,000**	**1,300**	--	--	--	--
Vanadium	**14**	**12**	**13**	550	--	--	--
Zinc	**62**	**51**	**54**	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	**0.31 J**	**0.27 J**	**0.46 J**	--	--	--	2
Boron	**0.53**	**0.5**	**0.61**	--	--	--	2
Chromium	ND U	ND U	ND U	--	--	--	0.1
Cobalt	ND U	ND U	ND U	--	--	--	1
Lead	ND U	ND U	ND U	--	--	--	0.0075
Manganese	**0.25 J L**	**0.97 J L**	**0.36 L**	--	--	--	0.15
Nickel	ND U	ND U	ND U	--	--	--	0.1
Zinc	ND U	**0.13 J**	**0.14 J**	--	--	--	5
SPLP Metals (mg/L)							
Lead	NA	NA	NA	--	--	--	0.0075
Manganese	**0.8 L**	**0.91 L**	**0.76 L**	--	--	--	0.15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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Tel: (708)534-5200

TestAmerica Job ID: 500-107641-3
Client Project/Site: IDOT - IL 38 - WO 008

For:
Ecology and Environment, Inc.
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Chicago, Illinois 60603

Attn: Mr. Dean Tiebout

Jodie Bracken

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Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-3

Job ID: 500-107641-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-3

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323872: 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 associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-18-B01 (0-1) (500-107641-9), 3011-18-B05 (0-1) (500-107641-12), 3011-18-B07 (0-1) (500-107641-13), 3011-18-B10 (0-1) (500-107641-15), 3011-18-B11 (0-1) (500-107641-16), (500-107641-E-1-D MS) and (500-107641-E-1-E 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 500-324170 and analytical batch 500-324562 contained 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) 6020A: The continuing calibration verification (CCV) associated with batch 500-324078, at lines 88 and 92 recovered above the upper control limit for Thallium. The affected samples were 500-107641-11 through 20. Also the CCVL at line 94 was outside the upper control limit for Thallium. The samples associated with these CCV and CCVL were non-detects for the affected analytes, therefore the samples were 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.

Client Sample ID: 3011-18-B01 (0-1)

Lab Sample ID: 500-107641-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.033	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.059		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.12		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.041		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.053		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.097		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.050		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.069		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.043		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.7		0.60	0.28	mg/Kg	1	☼	6010B	Total/NA
Barium	38		0.60	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.35		0.24	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	6.6		3.0	0.42	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.12	0.035	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	120	38	mg/Kg	10	☼	6010B	Total/NA
Chromium	10	B	0.60	0.10	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.5		0.30	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.60	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	9000	B	12	4.6	mg/Kg	1	☼	6010B	Total/NA
Lead	76		0.30	0.15	mg/Kg	1	☼	6010B	Total/NA
Magnesium	53000	B	6.0	2.4	mg/Kg	1	☼	6010B	Total/NA
Manganese	370		0.60	0.12	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.60	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	700		30	4.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		60	7.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.30	0.087	mg/Kg	1	☼	6010B	Total/NA
Zinc	62		1.2	0.38	mg/Kg	1	☼	6010B	Total/NA
Barium	0.31	J	0.50	0.050	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-18-B01 (0-1) (Continued) — Lab Sample ID: 500-107641-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.53		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.25		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.093	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.80		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.017	J	0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.42		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-18-B01 (0-1)D — Lab Sample ID: 500-107641-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.026	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.073		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.088		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.032	J	0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.042		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.077		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.025	J	0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.039		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.022	J	0.038	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.024	J	0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.0		0.58	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	25		0.58	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.25		0.23	0.050	mg/Kg	1	☼	6010B	Total/NA
Boron	6.3		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.12	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	120	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.3	B	0.58	0.099	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.1		0.29	0.065	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.58	0.13	mg/Kg	1	☼	6010B	Total/NA
Iron	7800	B	12	4.5	mg/Kg	1	☼	6010B	Total/NA
Lead	68		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	88000	B	58	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	330		0.58	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.1		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	510		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000		58	7.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.29	0.084	mg/Kg	1	☼	6010B	Total/NA
Zinc	51		1.2	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.50		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.97		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.13	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.91		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.017	0.0090	mg/Kg	1	☼	7471B	Total/NA
pH	8.51		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-18-B03 (0-1) — Lab Sample ID: 500-107641-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0057	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107641-3

Client Sample ID: 3011-18-B03 (0-1) (Continued)

Lab Sample ID: 500-107641-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.042		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	0.084		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.11		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.040		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.054		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.093		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.030	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.046		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.022	J	0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.022	J	0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.3		0.55	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	47		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.33		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	6.9		2.8	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.6	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.5		0.28	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8500	B	11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	42		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	51000	B	5.5	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	320		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	640		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.28	0.080	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.46	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.61		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.36		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.14	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.76		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.019		0.018	0.0096	mg/Kg	1	☼	7471B	Total/NA
pH	8.44		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-9	3011-18-B01 (0-1)	Solid	02/16/16 12:50	02/17/16 07:45
500-107641-10	3011-18-B01 (0-1)D	Solid	02/16/16 12:50	02/17/16 07:45
500-107641-11	3011-18-B03 (0-1)	Solid	02/16/16 13:05	02/17/16 07:45

Client Sample ID: 3011-18-B01 (0-1)
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-9
Matrix: Solid
Percent Solids: 82.0

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	☼	02/17/16 08:40	02/22/16 18:58	1
Benzene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Bromodichloromethane	<0.0054		0.0054	0.00091	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Bromoform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Bromomethane	<0.0054	*	0.0054	0.0020	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
2-Butanone (MEK)	<0.0054		0.0054	0.0019	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Carbon disulfide	<0.0054		0.0054	0.0020	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Carbon tetrachloride	<0.0054		0.0054	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Chlorobenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Chloroethane	<0.0054		0.0054	0.0023	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Chloroform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Chloromethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
cis-1,2-Dichloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
cis-1,3-Dichloropropene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Dibromochloromethane	<0.0054		0.0054	0.00062	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,1-Dichloroethane	<0.0054		0.0054	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,2-Dichloroethane	<0.0054		0.0054	0.00080	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,1-Dichloroethene	<0.0054		0.0054	0.0020	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,2-Dichloropropane	<0.0054		0.0054	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,3-Dichloropropene, Total	<0.0054		0.0054	0.0015	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Ethylbenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Methylene Chloride	<0.0054		0.0054	0.0041	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Methyl tert-butyl ether	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Styrene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,1,2,2-Tetrachloroethane	<0.0054		0.0054	0.00086	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Tetrachloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Toluene	<0.0054		0.0054	0.0019	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
trans-1,2-Dichloroethene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
trans-1,3-Dichloropropene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,1,1-Trichloroethane	<0.0054		0.0054	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
1,1,2-Trichloroethane	<0.0054		0.0054	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Trichloroethene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Vinyl acetate	<0.0054		0.0054	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Vinyl chloride	<0.0054		0.0054	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/17/16 08:40	02/22/16 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 122*	*02/17/16 08:40*	*02/22/16 18:58*	*1*
Dibromofluoromethane	*107*		*75 - 120*	*02/17/16 08:40*	*02/22/16 18:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 134*	*02/17/16 08:40*	*02/22/16 18:58*	*1*
Toluene-d8 (Surr)	*112*		*75 - 122*	*02/17/16 08:40*	*02/22/16 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	0.088	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1

Client Sample ID: 3011-18-B01 (0-1)
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-9
Matrix: Solid
Percent Solids: 82.0

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	☼	02/22/16 06:59	02/28/16 15:49	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2-Methylnaphthalene	<0.039		0.039	0.0072	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Phenanthrene	**0.033**	**J**	0.039	0.0055	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Anthracene	<0.039		0.039	0.0066	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Fluoranthene	**0.059**		0.039	0.0073	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Pyrene	**0.12**		0.039	0.0078	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Benzo[a]anthracene	**0.041**		0.039	0.0053	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1

Client Sample ID: 3011-18-B01 (0-1)
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-9
Matrix: Solid
Percent Solids: 82.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.053**		0.039	0.011	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Benzo[b]fluoranthene	**0.097**		0.039	0.0085	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Benzo[k]fluoranthene	**0.050**		0.039	0.012	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Benzo[a]pyrene	**0.069**		0.039	0.0076	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Indeno[1,2,3-cd]pyrene	<0.039		0.039	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
Benzo[g,h,i]perylene	**0.043**		0.039	0.013	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	02/22/16 06:59	02/28/16 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*87*		*25 - 110*	*02/22/16 06:59*	*02/28/16 15:49*	*1*
Phenol-d5	*82*		*31 - 110*	*02/22/16 06:59*	*02/28/16 15:49*	*1*
Nitrobenzene-d5	*72*		*25 - 115*	*02/22/16 06:59*	*02/28/16 15:49*	*1*
2-Fluorobiphenyl	*74*		*25 - 119*	*02/22/16 06:59*	*02/28/16 15:49*	*1*
2,4,6-Tribromophenol	*75*		*35 - 137*	*02/22/16 06:59*	*02/28/16 15:49*	*1*
Terphenyl-d14	*177*	*X*	*36 - 134*	*02/22/16 06:59*	*02/28/16 15:49*	*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	☼	02/23/16 16:44	02/26/16 03:30	1
Arsenic	**4.7**		0.60	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Barium	**38**		0.60	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Beryllium	**0.35**		0.24	0.052	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Boron	**6.6**		3.0	0.42	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Cadmium	**0.18**		0.12	0.035	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Calcium	**110000**	**B**	120	38	mg/Kg	☼	02/23/16 16:44	02/26/16 05:36	10
Chromium	**10**	**B**	0.60	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Cobalt	**5.5**		0.30	0.068	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Copper	**13**		0.60	0.13	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Iron	**9000**	**B**	12	4.6	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Lead	**76**		0.30	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Magnesium	**53000**	**B**	6.0	2.4	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Manganese	**370**		0.60	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Nickel	**12**		0.60	0.16	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Potassium	**700**		30	4.9	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Selenium	<0.60		0.60	0.30	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Silver	<0.30		0.30	0.070	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Sodium	**1300**		60	7.9	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Thallium	<0.60		0.60	0.29	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Vanadium	**14**		0.30	0.087	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	1
Zinc	**62**		1.2	0.38	mg/Kg	☼	02/23/16 16:44	02/26/16 03:30	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		02/21/16 16:00	02/23/16 21:08	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 21:08	1
Boron	**0.53**		0.50	0.050	mg/L		02/21/16 16:00	02/23/16 21:08	1

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

TestAmerica Job ID: 500-107641-3

Client Sample ID: 3011-18-B01 (0-1)
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-9
Matrix: Solid
Percent Solids: 82.0

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		02/21/16 16:00	02/23/16 21:08	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:08	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:08	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 21:08	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 21:08	1
Manganese	**0.25**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:08	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:08	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 21:08	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:08	1
Zinc	**0.093**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 21:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.80**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 03:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 19:46	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 19:46	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 11:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.017**	**J**	0.019	0.010	mg/Kg	☼	02/23/16 15:15	02/24/16 12:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.42**		0.200	0.200	SU			02/19/16 18:13	1

Client Sample ID: 3011-18-B01 (0-1)D
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-10
Matrix: Solid
Percent Solids: 84.3

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	☼	02/17/16 08:40	02/22/16 19:23	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Bromoform	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Bromomethane	<0.0045	*	0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Carbon disulfide	<0.0045		0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Carbon tetrachloride	<0.0045		0.0045	0.00097	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Chloroform	<0.0045		0.0045	0.00088	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,1-Dichloroethane	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,2-Dichloroethane	<0.0045		0.0045	0.00067	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Styrene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00072	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Tetrachloroethene	<0.0045		0.0045	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00088	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 122*	*02/17/16 08:40*	*02/22/16 19:23*	*1*
Dibromofluoromethane	*105*		*75 - 120*	*02/17/16 08:40*	*02/22/16 19:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 134*	*02/17/16 08:40*	*02/22/16 19:23*	*1*
Toluene-d8 (Surr)	*110*		*75 - 122*	*02/17/16 08:40*	*02/22/16 19:23*	*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	☼	02/22/16 06:59	03/01/16 01:19	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1

Client Sample ID: 3011-18-B01 (0-1)D
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-10
Matrix: Solid
Percent Solids: 84.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Hexachlorobenzene	<0.077		0.077	0.0089	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Phenanthrene	**0.026**	**J**	0.038	0.0053	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Anthracene	<0.038		0.038	0.0064	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Fluoranthene	**0.073**		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Pyrene	**0.088**		0.038	0.0076	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Benzo[a]anthracene	**0.032**	**J**	0.038	0.0051	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1

Client Sample ID: 3011-18-B01 (0-1)D
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-10
Matrix: Solid
Percent Solids: 84.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.042**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Benzo[b]fluoranthene	**0.077**		0.038	0.0082	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Benzo[k]fluoranthene	**0.025**	**J**	0.038	0.011	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Benzo[a]pyrene	**0.039**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Indeno[1,2,3-cd]pyrene	**0.022**	**J**	0.038	0.0099	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
Benzo[g,h,i]perylene	**0.024**	**J**	0.038	0.012	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	03/01/16 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*75*		*25 - 110*	*02/22/16 06:59*	*03/01/16 01:19*	*1*
Phenol-d5	*69*		*31 - 110*	*02/22/16 06:59*	*03/01/16 01:19*	*1*
Nitrobenzene-d5	*65*		*25 - 115*	*02/22/16 06:59*	*03/01/16 01:19*	*1*
2-Fluorobiphenyl	*69*		*25 - 119*	*02/22/16 06:59*	*03/01/16 01:19*	*1*
2,4,6-Tribromophenol	*35*		*35 - 137*	*02/22/16 06:59*	*03/01/16 01:19*	*1*
Terphenyl-d14	*117*		*36 - 134*	*02/22/16 06:59*	*03/01/16 01:19*	*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	☼	02/23/16 16:44	02/26/16 03:35	1
Arsenic	**3.0**		0.58	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Barium	**25**		0.58	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Beryllium	**0.25**		0.23	0.050	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Boron	**6.3**		2.9	0.40	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Cadmium	**0.18**		0.12	0.033	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Calcium	**150000**	**B**	120	37	mg/Kg	☼	02/23/16 16:44	02/26/16 05:40	10
Chromium	**8.3**	**B**	0.58	0.099	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Cobalt	**4.1**		0.29	0.065	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Copper	**12**		0.58	0.13	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Iron	**7800**	**B**	12	4.5	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Lead	**68**		0.29	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Magnesium	**88000**	**B**	58	23	mg/Kg	☼	02/23/16 16:44	02/26/16 05:40	10
Manganese	**330**		0.58	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Nickel	**9.1**		0.58	0.16	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Potassium	**510**		29	4.7	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Selenium	<0.58		0.58	0.29	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Silver	<0.29		0.29	0.068	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Sodium	**1000**		58	7.6	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Thallium	<0.58		0.58	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Vanadium	**12**		0.29	0.084	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	1
Zinc	**51**		1.2	0.37	mg/Kg	☼	02/23/16 16:44	02/26/16 03:35	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		02/21/16 16:00	02/23/16 21:15	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 21:15	1
Boron	**0.50**		0.50	0.050	mg/L		02/21/16 16:00	02/23/16 21:15	1

Client Sample ID: 3011-18-B01 (0-1)D
Date Collected: 02/16/16 12:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-10
Matrix: Solid
Percent Solids: 84.3

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		02/21/16 16:00	02/23/16 21:15	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:15	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:15	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 21:15	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 21:15	1
Manganese	**0.97**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:15	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:15	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 21:15	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:15	1
Zinc	**0.13**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 21:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.91**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 03:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 19:50	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 19:50	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		02/22/16 15:15	02/23/16 11:16	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.016**	**J**	0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.51**		0.200	0.200	SU			02/19/16 18:23	1

Client Sample ID: 3011-18-B03 (0-1)
Date Collected: 02/16/16 13:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-11
Matrix: Solid
Percent Solids: 88.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Bromodichloromethane	<0.0046		0.0046	0.00077	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Bromomethane	<0.0046	*	0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Chloroform	<0.0046		0.0046	0.00089	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,1-Dichloroethane	<0.0046		0.0046	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Tetrachloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 122*	*02/17/16 08:40*	*02/22/16 19:48*	*1*
Dibromofluoromethane	*107*		*75 - 120*	*02/17/16 08:40*	*02/22/16 19:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 134*	*02/17/16 08:40*	*02/22/16 19:48*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/17/16 08:40*	*02/22/16 19:48*	*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	☼	02/22/16 06:59	03/01/16 01:48	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1

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

TestAmerica Job ID: 500-107641-3

Client Sample ID: 3011-18-B03 (0-1)
Date Collected: 02/16/16 13:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-11
Matrix: Solid
Percent Solids: 88.1

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	☼	02/22/16 06:59	03/01/16 01:48	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Acenaphthylene	**0.0057**	**J**	0.036	0.0048	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Phenanthrene	**0.042**		0.036	0.0051	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Anthracene	**0.0072**	**J**	0.036	0.0061	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Fluoranthene	**0.084**		0.036	0.0068	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Pyrene	**0.11**		0.036	0.0073	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Benzo[a]anthracene	**0.040**		0.036	0.0049	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1

Client Sample ID: 3011-18-B03 (0-1)
Date Collected: 02/16/16 13:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-11
Matrix: Solid
Percent Solids: 88.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.054**		0.036	0.010	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Benzo[b]fluoranthene	**0.093**		0.036	0.0079	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Benzo[k]fluoranthene	**0.030**	**J**	0.036	0.011	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Benzo[a]pyrene	**0.046**		0.036	0.0071	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Indeno[1,2,3-cd]pyrene	**0.022**	**J**	0.036	0.0095	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
Benzo[g,h,i]perylene	**0.022**	**J**	0.036	0.012	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 06:59	03/01/16 01:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*80*		*25 - 110*	*02/22/16 06:59*	*03/01/16 01:48*	*1*
Phenol-d5	*78*		*31 - 110*	*02/22/16 06:59*	*03/01/16 01:48*	*1*
Nitrobenzene-d5	*69*		*25 - 115*	*02/22/16 06:59*	*03/01/16 01:48*	*1*
2-Fluorobiphenyl	*77*		*25 - 119*	*02/22/16 06:59*	*03/01/16 01:48*	*1*
2,4,6-Tribromophenol	*55*		*35 - 137*	*02/22/16 06:59*	*03/01/16 01:48*	*1*
Terphenyl-d14	*132*		*36 - 134*	*02/22/16 06:59*	*03/01/16 01:48*	*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	☼	02/23/16 16:44	02/26/16 03:40	1
Arsenic	**3.3**		0.55	0.25	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Barium	**47**		0.55	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Beryllium	**0.33**		0.22	0.048	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Boron	**6.9**		2.8	0.38	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Cadmium	**0.15**		0.11	0.032	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Calcium	**110000**	**B**	110	35	mg/Kg	☼	02/23/16 16:44	02/26/16 05:52	10
Chromium	**8.6**	**B**	0.55	0.095	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Cobalt	**4.5**		0.28	0.062	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Copper	**12**		0.55	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Iron	**8500**	**B**	11	4.2	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Lead	**42**		0.28	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Magnesium	**51000**	**B**	5.5	2.2	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Manganese	**320**		0.55	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Nickel	**10**		0.55	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Potassium	**640**		28	4.5	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Silver	<0.28		0.28	0.064	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Sodium	**1300**		55	7.3	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Vanadium	**13**		0.28	0.080	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1
Zinc	**54**		1.1	0.35	mg/Kg	☼	02/23/16 16:44	02/26/16 03:40	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.46**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 21:58	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 21:58	1
Boron	**0.61**		0.50	0.050	mg/L		02/21/16 16:00	02/23/16 21:58	1

Client Sample ID: 3011-18-B03 (0-1)
Date Collected: 02/16/16 13:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-11
Matrix: Solid
Percent Solids: 88.1

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		02/21/16 16:00	02/23/16 21:58	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:58	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:58	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 21:58	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 21:58	1
Manganese	**0.36**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:58	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:58	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 21:58	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 21:58	1
Zinc	**0.14**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 21:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.76**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 04:04	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		02/21/16 16:00	02/22/16 20:14	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 20:14	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		02/22/16 15:15	02/23/16 11:18	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.019**		0.018	0.0096	mg/Kg	☼	02/23/16 15:15	02/24/16 12:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.44**		0.200	0.200	SU			02/19/16 18:33	1

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
^	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.
¤	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: 500-107641-3

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 #: 500-107641

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.00EE-01
Project Name: IC 38
Project Location/State: Kane County, IL
Lab Project #: 500116E64
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total Metals	TCLP/SPLP Tot Metals	pH (Co Solid)					Comments
5		3011-18-B08 (0-1)	2/16/16	1130	2	S	X	X	X	X	X					
6		3011-18-B06 (0-1)	2-16-16	1135	2	S	X	X	X	X	X					
7		3011-18-B04 (0-1)	2-16-16	1140	2	S	X	X	X	X	X					
8		3011-18-B02 (0-1)	2-16-16	1145	2	S	X	X	X	X	X					
9		3011-18-B01 (0-1)	2/16/16	1250	2	S	X	X	X	X	X					
10		3011-18-B01 (0-1) D	2-16-16	1258	2	S	X	X	X	X	X					
11		3011-18-B03 (0-1)	2/16/16	1305	2	S	X	X	X	X	X					
12		3011-18-B05 (0-1)	2/16/16	1310	2	S	X	X	X	X	X					
13		3011-18-B07 (0-1)	2-16-16	1325	2	S	X	X	X	X	X					
14		3011-18-B09 (0-1)	2/16/16	1330	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
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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:

TAL-4124-500 (1209)

1 2 3 4 5 6 7 8 9 10

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 #: 500-107641

Chain of Custody Number:

Page ___ of ___

Temperature °C of Cooler:

Client: EE
Client Project #: 100 9741-0008.01
Project Name: FL 78
Project Location/State: Kane County, FL
Lab Project #: 500118 44
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL Metals	TCLP/SPLP TAL Metals	pH/% Solids	Comments
15		Soil 78-B10 (0-1)	2-16-16	1340	2	S	X	X	X	X	X	
16		Soil-78-B11 (0-1)	2-16-16	1350	2	S	X	X	X	X	X	

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
H. Neal	TA	2/16/16	1715	Shaun Scott	TA-CHI	2/17/16	0948

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:

W-1412(0208)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107641-3

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107641-5
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:
3/1/2016 5:25:49 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-5

Job ID: 500-107641-5

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-5

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324220: 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 500-324220 recovered outside control limits for the following analyte: Acetone.

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

GC/MS Semi VOA
Method(s) 8270D: The following sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-20-B01 (0-1) (500-107641-18), (500-107641-E-1-D MS) and (500-107641-E-1-E 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 500-324170 and analytical batch 500-324562 contained 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.

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: 500-107641-5

Client Sample ID: 3011-20-B01 (0-1)

Lab Sample ID: 500-107641-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.037		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0092	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.055		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.13		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.037		0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.060		0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.094		0.036	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.039		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.065		0.036	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.063		0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.082		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.4		0.51	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	18		0.51	0.094	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.20		0.20	0.044	mg/Kg	1	☼	6010B	Total/NA
Boron	10		2.6	0.36	mg/Kg	1	☼	6010B	Total/NA
Calcium	190000	B	100	33	mg/Kg	10	☼	6010B	Total/NA
Chromium	5.7	B	0.51	0.088	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.1		0.26	0.058	mg/Kg	1	☼	6010B	Total/NA
Copper	7.9		0.51	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	6200	B	10	4.0	mg/Kg	1	☼	6010B	Total/NA
Lead	11		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	110000	B	51	21	mg/Kg	10	☼	6010B	Total/NA
Manganese	270		0.51	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.3		0.51	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	600		26	4.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	590		51	6.8	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.6		0.26	0.075	mg/Kg	1	☼	6010B	Total/NA
Zinc	23		1.0	0.32	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.3		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.84	B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.039		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.21		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-18	3011-20-B01 (0-1)	Solid	02/16/16 13:00	02/17/16 07:45

Client Sample ID: 3011-20-B01 (0-1)
Date Collected: 02/16/16 13:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-18
Matrix: Solid
Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016	*	0.016	0.0030	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Benzene	<0.0039		0.0039	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Bromodichloromethane	<0.0039		0.0039	0.00066	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Bromoform	<0.0039		0.0039	0.00080	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Bromomethane	<0.0039	*	0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
2-Butanone (MEK)	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Carbon disulfide	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Carbon tetrachloride	<0.0039		0.0039	0.00084	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Chlorobenzene	<0.0039		0.0039	0.00093	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Chloroethane	<0.0039		0.0039	0.0017	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Chloroform	<0.0039		0.0039	0.00077	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Chloromethane	<0.0039		0.0039	0.00094	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
cis-1,2-Dichloroethene	<0.0039		0.0039	0.00080	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
cis-1,3-Dichloropropene	<0.0039		0.0039	0.00090	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Dibromochloromethane	<0.0039		0.0039	0.00045	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,1-Dichloroethane	<0.0039		0.0039	0.00081	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,2-Dichloroethane	<0.0039		0.0039	0.00058	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,1-Dichloroethene	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,2-Dichloropropane	<0.0039		0.0039	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,3-Dichloropropene, Total	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Ethylbenzene	<0.0039		0.0039	0.00097	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
2-Hexanone	<0.0039		0.0039	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Methylene Chloride	<0.0039		0.0039	0.0030	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
4-Methyl-2-pentanone (MIBK)	<0.0039		0.0039	0.00081	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Methyl tert-butyl ether	<0.0039		0.0039	0.00093	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Styrene	<0.0039		0.0039	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,1,2,2-Tetrachloroethane	<0.0039		0.0039	0.00062	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Tetrachloroethene	<0.0039		0.0039	0.00082	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Toluene	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
trans-1,2-Dichloroethene	<0.0039		0.0039	0.00098	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
trans-1,3-Dichloropropene	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,1,1-Trichloroethane	<0.0039		0.0039	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
1,1,2-Trichloroethane	<0.0039		0.0039	0.00076	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Trichloroethene	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Vinyl acetate	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Vinyl chloride	<0.0039		0.0039	0.00094	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1
Xylenes, Total	<0.0079		0.0079	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 11:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 122*	*02/17/16 08:40*	*02/24/16 11:07*	*1*
Dibromofluoromethane	*105*		*75 - 120*	*02/17/16 08:40*	*02/24/16 11:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 134*	*02/17/16 08:40*	*02/24/16 11:07*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/17/16 08:40*	*02/24/16 11:07*	*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	☼	02/22/16 06:59	02/28/16 20:33	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1

Client Sample ID: 3011-20-B01 (0-1)
Date Collected: 02/16/16 13:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-18
Matrix: Solid
Percent Solids: 91.0

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	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Pentachlorophenol	<0.72		0.72	0.58	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Phenanthrene	**0.037**		0.036	0.0050	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Anthracene	**0.0092**	**J**	0.036	0.0060	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Fluoranthene	**0.055**		0.036	0.0067	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Pyrene	**0.13**		0.036	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Benzo[a]anthracene	**0.037**		0.036	0.0048	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1

Client Sample ID: 3011-20-B01 (0-1)
Date Collected: 02/16/16 13:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-18
Matrix: Solid
Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.060**		0.036	0.0098	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Benzo[b]fluoranthene	**0.094**		0.036	0.0077	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Benzo[k]fluoranthene	**0.039**		0.036	0.011	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Benzo[a]pyrene	**0.065**		0.036	0.0069	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Indeno[1,2,3-cd]pyrene	**0.063**		0.036	0.0093	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
Benzo[g,h,i]perylene	**0.082**		0.036	0.012	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/22/16 06:59*	*02/28/16 20:33*	*1*
Phenol-d5	*79*		*31 - 110*	*02/22/16 06:59*	*02/28/16 20:33*	*1*
Nitrobenzene-d5	*72*		*25 - 115*	*02/22/16 06:59*	*02/28/16 20:33*	*1*
2-Fluorobiphenyl	*78*		*25 - 119*	*02/22/16 06:59*	*02/28/16 20:33*	*1*
2,4,6-Tribromophenol	*85*		*35 - 137*	*02/22/16 06:59*	*02/28/16 20:33*	*1*
Terphenyl-d14	*205*	*X*	*36 - 134*	*02/22/16 06:59*	*02/28/16 20:33*	*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	☼	02/23/16 16:44	02/26/16 04:24	1
Arsenic	**2.4**		0.51	0.24	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Barium	**18**		0.51	0.094	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Beryllium	**0.20**		0.20	0.044	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Boron	**10**		2.6	0.36	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Cadmium	<0.10		0.10	0.030	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Calcium	**190000**	**B**	100	33	mg/Kg	☼	02/23/16 16:44	02/26/16 06:21	10
Chromium	**5.7**	**B**	0.51	0.088	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Cobalt	**3.1**		0.26	0.058	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Copper	**7.9**		0.51	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Iron	**6200**	**B**	10	4.0	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Lead	**11**		0.26	0.13	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Magnesium	**110000**	**B**	51	21	mg/Kg	☼	02/23/16 16:44	02/26/16 06:21	10
Manganese	**270**		0.51	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Nickel	**7.3**		0.51	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Potassium	**600**		26	4.2	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Selenium	<0.51		0.51	0.25	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Silver	<0.26		0.26	0.060	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Sodium	**590**		51	6.8	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Thallium	<0.51		0.51	0.25	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Vanadium	**8.6**		0.26	0.075	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	1
Zinc	**23**		1.0	0.32	mg/Kg	☼	02/23/16 16:44	02/26/16 04:24	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		02/21/16 16:00	02/23/16 22:45	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 22:45	1
Boron	**0.35**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:45	1

Client Sample ID: 3011-20-B01 (0-1)
Date Collected: 02/16/16 13:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-18
Matrix: Solid
Percent Solids: 91.0

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		02/21/16 16:00	02/23/16 22:45	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:45	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:45	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 22:45	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 22:45	1
Manganese	**2.3**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:45	1
Nickel	**0.013**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:45	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 22:45	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:45	1
Zinc	**0.84**	**B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 22:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.039**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 05:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 20:43	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 20:43	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		02/22/16 15:15	02/23/16 11:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.21**		0.200	0.200	SU			02/19/16 19:41	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-5

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
^	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.
¤	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: 500-107641-5

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

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

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

Chain of Custody Record

Lab Job #: 500-107641
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 1009741-0008.01
Project Name: IL38
Project Location/State: Kane County, IL
Lab Project #: 500118164
Sampler: S. Cooper
Lab PM: Dwight

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	Parameter: SVOC	Parameter: Total TAL Metals	Parameter: TCLP SVOC TAL Metals	Parameter: pH 9045 (1)	Comments
18		3011-20-B01(01)	2/6/16	1300	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
1		EE	2/6/16	1530		TA	2/6/16	1530
2		TA	2/6/16	1715		TA-CHI	2/7/16	0745
3								

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:

3/1/2016

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107641-5

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, incldluding number and street):

48W 178 IL 38 ISGS #3011-21 (Residence)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89471762 (Decimal Degrees) Longitude: -88.54945962 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89471762 Longitude: -88.54945962

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 3011-21-B01 and 3011-22-B01 were sampled within the construction zone adjacent to ISGS #3011-21 (Residence). Refer to PSI Report for ISGS #3011-21 (Residence) including Table 4-4, and Figures 4-4A&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 J107641-6 and J107641-7.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-21 (Residence)		Comparison Criteria			
BORING	3011-21-B01		MACs			TACO
SAMPLE	3011-21-B01 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.58					
VOCs (None Detected)						
SVOCs (mg/kg)						
2-Methylnaphthalene	**0.011**	**J**	--	--	--	--
Acenaphthylene	**0.008**	**J**	--	--	--	--
Anthracene	**0.017**	**J**	12,000	--	--	--
Benzo[a]anthracene	**0.11**		0.9	1.8	1.1	--
Benzo[a]pyrene	**0.15**	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.24**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.17**		--	--	--	--
Benzo[k]fluoranthene	**0.12**		9	--	--	--
Bis(2-ethylhexyl) phthalate	**0.1**	**J**	46	--	--	--
Chrysene	**0.15**		88	--	--	--
Dibenzo(a,h)anthracene	**0.047**		0.09	0.42	0.2	--
Di-n-butyl phthalate	**0.23**		2,300	--	--	--
Fluoranthene	**0.16**		3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.15**		0.9	1.6	0.9	--
Naphthalene	**0.0075**	**J**	1.8	--	--	--
Phenanthrene	**0.079**		--	--	--	--
Pyrene	**0.34**		2,300	--	--	--
Inorganics (mg/kg)						
Arsenic	**3.6**		11.3	13	--	--
Barium	**36**		1,500	--	--	--
Beryllium	**0.31**		22	--	--	--
Boron	**6.3**		40	--	--	--
Cadmium	**0.24**		5.2	--	--	--
Calcium	**140,000**		--	--	--	--
Chromium	**11**		21	--	--	--
Cobalt	**4.2**		20	--	--	--
Copper	**14**		2,900	--	--	--
Iron	**8,300**		15,000	15,900	--	--
Lead	**150**	†	107	--	--	--
Magnesium	**55,000**		325,000	--	--	--
Manganese	**340**		630	636	--	--
Mercury	**0.015**	**J**	0.89	--	--	--
Nickel	**11**		100	--	--	--
Potassium	**560**		--	--	--	--
Sodium	**1,300**		--	--	--	--
Vanadium	**12**		550	--	--	--
Zinc	**79**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.31**	**J**	--	--	--	2
Boron	**0.27**	**J**	--	--	--	2
Lead	ND	U	--	--	--	0.0075
Manganese	**0.78**	**L**	--	--	--	0.15
Nickel	ND	U	--	--	--	0.1
Zinc	**0.25**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.65**	**L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-22 (Foracres Landscaping)		Comparison Criteria			
BORING	3011-22-B01		MACs			TACO
SAMPLE	3011-22-B01 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.56					
VOCs (None Detected)						
SVOCs (mg/kg)						
Anthracene	**0.0061**	**J**	12,000	--	--	--
Benzo[a]anthracene	**0.047**		0.9	1.8	1.1	--
Benzo[a]pyrene	**0.063**		0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.097**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.053**		--	--	--	--
Benzo[k]fluoranthene	**0.042**		9	--	--	--
Chrysene	**0.072**		88	--	--	--
Dibenzo(a,h)anthracene	ND	U	0.09	0.42	0.2	--
Fluoranthene	**0.07**	**J**	3,100	--	--	--
Fluorene	ND	U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.031**	**J**	0.9	1.6	0.9	--
Phenanthrene	**0.037**		--	--	--	--
Pyrene	**0.15**	**J**	2,300	--	--	--
Inorganics (mg/kg)						
Arsenic	**5.1**		11.3	13	--	--
Barium	**50**		1,500	--	--	--
Beryllium	**0.67**		22	--	--	--
Boron	**7.2**		40	--	--	--
Cadmium	ND	U	5.2	--	--	--
Calcium	**150,000**		--	--	--	--
Chromium	**17**		21	--	--	--
Cobalt	**11**		20	--	--	--
Copper	**21**		2,900	--	--	--
Iron	**17,000**	**†m**	15,000	15,900	--	--
Lead	**12**		107	--	--	--
Magnesium	**24,000**		325,000	--	--	--
Manganese	**370**		630	636	--	--
Mercury	ND	U	0.89	--	--	--
Nickel	**31**		100	--	--	--
Potassium	**1,800**		--	--	--	--
Sodium	**500**		--	--	--	--
Vanadium	**20**		550	--	--	--
Zinc	**49**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.44**	**J**	--	--	--	2
Boron	**0.48**	**J**	--	--	--	2
Cobalt	**0.013**	**J**	--	--	--	1
Iron	ND	U	--	--	--	5
Manganese	**2.7**	**L**	--	--	--	0.15
Nickel	**0.016**	**J**	--	--	--	0.1
Zinc	**0.47**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.11**		--	--	--	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: 500-107641-6
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:
3/1/2016 5:26:21 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

Table of Contents

Job ID: 500-107641-6

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-6

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: Due to internal standard (ISTD)area failures, a dilution was required for the following sample:3011-21-B01 (0-1) (500-107641-19). 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.

Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with324385: Bromomethane. 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-21-B01 (0-1) (500-107641-19), (500-107641-E-1-D MS) and (500-107641-E-1-E 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 500-324170 and analytical batch 500-324562 contained 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.

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: 500-107641-6

Client Sample ID: 3011-21-B01 (0-1)

Lab Sample ID: 500-107641-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0075	J	0.037	0.0058	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.011	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.0080	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.079		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.017	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Di-n-butyl phthalate	0.23		0.19	0.057	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.16		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.34		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	0.15		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.10	J	0.19	0.068	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.24		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.15		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.15		0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.047		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.17		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.6		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	36		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.31		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	6.3		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.24		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.56	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.2		0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8300	B	11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	150		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	55000	B	5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	340		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	11		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	560		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	79		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.31	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.78		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.65		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	8.58		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-6

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-19	3011-21-B01 (0-1)	Solid	02/16/16 11:25	02/17/16 07:45

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

TestAmerica Job ID: 500-107641-6

Client Sample ID: 3011-21-B01 (0-1)
Date Collected: 02/16/16 11:25
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-19
Matrix: Solid
Percent Solids: 83.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.27		0.27	0.095	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Benzene	<0.014		0.014	0.0080	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Bromodichloromethane	<0.055		0.055	0.020	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Bromoform	<0.055	*	0.055	0.026	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Bromomethane	<0.11		0.11	0.044	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
2-Butanone (MEK)	<0.27		0.27	0.12	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Carbon disulfide	<0.11		0.11	0.044	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Carbon tetrachloride	<0.055		0.055	0.021	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Chlorobenzene	<0.055		0.055	0.021	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Chloroethane	<0.055		0.055	0.028	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Chloroform	<0.055		0.055	0.020	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Chloromethane	<0.055		0.055	0.018	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
cis-1,2-Dichloroethene	<0.055		0.055	0.022	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
cis-1,3-Dichloropropene	<0.055		0.055	0.023	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Dibromochloromethane	<0.055		0.055	0.027	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,1-Dichloroethane	<0.055		0.055	0.022	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,2-Dichloroethane	<0.055		0.055	0.021	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,1-Dichloroethene	<0.055		0.055	0.021	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,2-Dichloropropane	<0.055		0.055	0.023	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,3-Dichloropropene, Total	<0.055		0.055	0.023	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Ethylbenzene	<0.014		0.014	0.010	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
2-Hexanone	<0.27		0.27	0.085	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Methylene Chloride	<0.27		0.27	0.089	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
4-Methyl-2-pentanone (MIBK)	<0.27		0.27	0.12	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Methyl tert-butyl ether	<0.055		0.055	0.022	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Styrene	<0.055		0.055	0.021	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,1,2,2-Tetrachloroethane	<0.055		0.055	0.022	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Tetrachloroethene	<0.055		0.055	0.020	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Toluene	<0.014		0.014	0.0080	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
trans-1,2-Dichloroethene	<0.055		0.055	0.019	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
trans-1,3-Dichloropropene	<0.055		0.055	0.020	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,1,1-Trichloroethane	<0.055		0.055	0.021	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
1,1,2-Trichloroethane	<0.055		0.055	0.019	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Trichloroethene	<0.027		0.027	0.0090	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Vinyl acetate	<0.11		0.11	0.049	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Vinyl chloride	<0.027		0.027	0.014	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50
Xylenes, Total	<0.027		0.027	0.012	mg/Kg	☼	02/16/16 11:25	02/25/16 20:21	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*75 - 120*	*02/16/16 11:25*	*02/25/16 20:21*	*50*
Dibromofluoromethane	*83*		*75 - 120*	*02/16/16 11:25*	*02/25/16 20:21*	*50*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 125*	*02/16/16 11:25*	*02/25/16 20:21*	*50*
Toluene-d8 (Surr)	*92*		*75 - 120*	*02/16/16 11:25*	*02/25/16 20:21*	*50*

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	☼	02/22/16 06:59	02/28/16 19:36	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1

Client Sample ID: 3011-21-B01 (0-1)
Date Collected: 02/16/16 11:25
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-19
Matrix: Solid
Percent Solids: 83.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Naphthalene	**0.0075**	**J**	0.037	0.0058	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2-Methylnaphthalene	**0.011**	**J**	0.037	0.0069	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Acenaphthylene	**0.0080**	**J**	0.037	0.0049	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Phenanthrene	**0.079**		0.037	0.0052	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Anthracene	**0.017**	**J**	0.037	0.0063	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Di-n-butyl phthalate	**0.23**		0.19	0.057	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Fluoranthene	**0.16**		0.037	0.0069	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Pyrene	**0.34**		0.037	0.0074	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Benzo[a]anthracene	**0.11**		0.037	0.0050	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1

Client Sample ID: 3011-21-B01 (0-1)
Date Collected: 02/16/16 11:25
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-19
Matrix: Solid
Percent Solids: 83.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.15**		0.037	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Bis(2-ethylhexyl) phthalate	**0.10**	**J**	0.19	0.068	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Benzo[b]fluoranthene	**0.24**		0.037	0.0081	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Benzo[k]fluoranthene	**0.12**		0.037	0.011	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Benzo[a]pyrene	**0.15**		0.037	0.0073	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Indeno[1,2,3-cd]pyrene	**0.15**		0.037	0.0097	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Dibenz(a,h)anthracene	**0.047**		0.037	0.0072	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
Benzo[g,h,i]perylene	**0.17**		0.037	0.012	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 06:59	02/28/16 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*83*		*25 - 110*	*02/22/16 06:59*	*02/28/16 19:36*	*1*
Phenol-d5	*74*		*31 - 110*	*02/22/16 06:59*	*02/28/16 19:36*	*1*
Nitrobenzene-d5	*73*		*25 - 115*	*02/22/16 06:59*	*02/28/16 19:36*	*1*
2-Fluorobiphenyl	*78*		*25 - 119*	*02/22/16 06:59*	*02/28/16 19:36*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/22/16 06:59*	*02/28/16 19:36*	*1*
Terphenyl-d14	*202*	*X*	*36 - 134*	*02/22/16 06:59*	*02/28/16 19:36*	*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	☼	02/23/16 16:44	02/26/16 04:29	1
Arsenic	**3.6**		0.56	0.26	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Barium	**36**		0.56	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Beryllium	**0.31**		0.22	0.049	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Boron	**6.3**		2.8	0.39	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Cadmium	**0.24**		0.11	0.033	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Calcium	**140000**	**B**	110	36	mg/Kg	☼	02/23/16 16:44	02/26/16 06:26	10
Chromium	**11**	**B**	0.56	0.097	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Cobalt	**4.2**		0.28	0.064	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Copper	**14**		0.56	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Iron	**8300**	**B**	11	4.3	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Lead	**150**		0.28	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Magnesium	**55000**	**B**	5.6	2.3	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Manganese	**340**		0.56	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Nickel	**11**		0.56	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Potassium	**560**		28	4.6	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Sodium	**1300**		56	7.4	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Vanadium	**12**		0.28	0.082	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	1
Zinc	**79**		1.1	0.36	mg/Kg	☼	02/23/16 16:44	02/26/16 04:29	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		02/21/16 16:00	02/23/16 22:52	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 22:52	1
Boron	**0.27**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:52	1

Client Sample ID: 3011-21-B01 (0-1)
Date Collected: 02/16/16 11:25
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-19
Matrix: Solid
Percent Solids: 83.5

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		02/21/16 16:00	02/23/16 22:52	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:52	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:52	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 22:52	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 22:52	1
Manganese	**0.78**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:52	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:52	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 22:52	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:52	1
Zinc	**0.25**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 22:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.65**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 05:14	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		02/21/16 16:00	02/22/16 20:55	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 20:55	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		02/22/16 15:15	02/23/16 11:34	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	☼	02/23/16 15:15	02/24/16 13:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.58**		0.200	0.200	SU			02/19/16 19:51	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-6

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	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: 500-107641-6

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)	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 #: 500-107641

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0008.01
Project Name: IL 38
Project Location/State: Kane County IL
Lab Project #: 50011664
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total RCRA metals	TCLP/SPLP RCRA metals	pH/% Solids					Comments
19		3011-21-B01(0-1)	2/16/16	1125	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

[signature] 2-16-16

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
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0945

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:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107641-6

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107641-7
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:
3/1/2016 5:26:45 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-7

Job ID: 500-107641-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-7

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-22-B02 (0-1) (500-107641-20), 3011-22-B01 (0-1) (500-107641-21), (500-107641-E-1-D MS), (500-107641-E-1-E MSD), (500-107641-E-21-B MS) and (500-107641-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 500-324173 and analytical batch 500-324528 contained Calcium and Magnesium above the reporting limit (RL). Associated sample 3011-22-B01 (0-1) (500-107641-21) 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 500-324170 and analytical batch 500-324562 contained 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) 7470A: The continuing calibration verification (CCV) associated with batch 500-324121 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 500-324121/23).

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.

Client Sample ID: 3011-22-B01 (0-1)

Lab Sample ID: 500-107641-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.037		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0061	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.070	F1	0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15	F1	0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.047		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.072		0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.097		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.042		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107641-7

Client Sample ID: 3011-22-B01 (0-1) (Continued)

Lab Sample ID: 500-107641-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.063		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.031	J	0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.053		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.1		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	50		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.67		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	7.2		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	17		0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.28	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	21		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	17000		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000		5.5	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	370		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	31		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	1800		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Sodium	500		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	49		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.48	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	2.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.47	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.11		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.56		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-21	3011-22-B01 (0-1)	Solid	02/16/16 11:15	02/17/16 07:45

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

TestAmerica Job ID: 500-107641-7

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
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	0.0034	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Benzene	<0.0044		0.0044	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Bromodichloromethane	<0.0044		0.0044	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Bromoform	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Carbon tetrachloride	<0.0044		0.0044	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chloroethane	<0.0044		0.0044	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chloroform	<0.0044		0.0044	0.00086	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chloromethane	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Dibromochloromethane	<0.0044		0.0044	0.00051	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1-Dichloroethane	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,2-Dichloroethane	<0.0044		0.0044	0.00065	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,2-Dichloropropane	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,3-Dichloropropene, Total	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Methylene Chloride	<0.0044		0.0044	0.0033	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00070	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Tetrachloroethene	<0.0044		0.0044	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Vinyl acetate	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Vinyl chloride	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Xylenes, Total	<0.0088		0.0088	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 122*	*02/17/16 08:40*	*02/23/16 13:53*	*1*
Dibromofluoromethane	*107*		*75 - 120*	*02/17/16 08:40*	*02/23/16 13:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 134*	*02/17/16 08:40*	*02/23/16 13:53*	*1*
Toluene-d8 (Surr)	*111*		*75 - 122*	*02/17/16 08:40*	*02/23/16 13:53*	*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	☼	02/18/16 18:29	02/26/16 16:48	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
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	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachloroethane	<0.18	F1	0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachlorocyclopentadiene	<0.73	F1	0.73	0.21	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dinitrophenol	<0.73	F1	0.73	0.64	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Pentachlorophenol	<0.73	F1	0.73	0.58	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4,6-Dinitro-2-methylphenol	<0.73	F1	0.73	0.29	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Phenanthrene	**0.037**		0.036	0.0050	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Anthracene	**0.0061**	**J**	0.036	0.0060	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Fluoranthene	**0.070**	**F1**	0.036	0.0067	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Pyrene	**0.15**	**F1**	0.036	0.0072	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Butyl benzyl phthalate	<0.18	F1	0.18	0.069	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[a]anthracene	**0.047**		0.036	0.0049	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.072**		0.036	0.0098	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Di-n-octyl phthalate	<0.18	F1	0.18	0.059	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[b]fluoranthene	**0.097**		0.036	0.0078	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[k]fluoranthene	**0.042**		0.036	0.011	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[a]pyrene	**0.063**		0.036	0.0070	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Indeno[1,2,3-cd]pyrene	**0.031**	**J**	0.036	0.0093	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[g,h,i]perylene	**0.053**		0.036	0.012	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*74*		*25 - 110*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
Phenol-d5	*75*		*31 - 110*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
Nitrobenzene-d5	*73*		*25 - 115*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
2-Fluorobiphenyl	*75*		*25 - 119*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
2,4,6-Tribromophenol	*85*		*35 - 137*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
Terphenyl-d14	*148*	*X*	*36 - 134*	*02/18/16 18:29*	*02/26/16 16:48*	*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	☼	02/23/16 16:49	02/25/16 20:02	1
Arsenic	**5.1**		0.55	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Barium	**50**		0.55	0.10	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Beryllium	**0.67**		0.22	0.048	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Boron	**7.2**		2.8	0.39	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Cadmium	<0.11		0.11	0.032	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Calcium	**150000**	**B**	110	36	mg/Kg	☼	02/23/16 16:49	02/26/16 15:00	10
Chromium	**17**		0.55	0.095	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Cobalt	**11**		0.28	0.062	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Copper	**21**		0.55	0.12	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Iron	**17000**		11	4.3	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Lead	**12**		0.28	0.14	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Magnesium	**24000**		5.5	2.2	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Manganese	**370**		0.55	0.11	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Nickel	**31**		0.55	0.15	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Potassium	**1800**		28	4.5	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Selenium	**0.35**	**J**	0.55	0.27	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Sodium	**500**		55	7.3	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Vanadium	**20**		0.28	0.081	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Zinc	**49**		1.1	0.35	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	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		02/21/16 16:00	02/22/16 19:57	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/22/16 19:57	1
Boron	**0.48**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/22/16 19:57	1

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
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		02/21/16 16:00	02/22/16 19:57	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Cobalt	**0.013**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/22/16 19:57	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/22/16 19:57	1
Manganese	**2.7**		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Nickel	**0.016**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/22/16 19:57	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Zinc	**0.47**	**J**	0.50	0.020	mg/L		02/21/16 16:00	02/22/16 19:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.11**		0.025	0.010	mg/L		02/23/16 09:23	02/25/16 05:43	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		02/21/16 16:00	02/22/16 18:36	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 18:36	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 10:46	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	☼	02/23/16 15:15	02/24/16 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.56**		0.200	0.200	SU			02/19/16 20:11	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-7

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
F1	MS and/or MSD Recovery is outside acceptance 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.
¤	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: 500-107641-7

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

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

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

Chain of Custody Record

Lab Job #: 500-107641
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 100934.000E.01
Project Name: IL38
Project Location/State: Kane County, IL
Lab Project #: 500IE64
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	SVOC	Total TAL Metals	TCLP SPLP TAL Metals	pH/% Solids	Comments
20		3011-22-B02(0-1)	2/16	1110	2	S		X	X	X	X	X	
21		3011-22-B01(0-1)	2/16	1115	2	S		X	X	X	X	X	

2-16-16

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
[illegible]	EE	2/16/16	1530	[illegible]	TA	2/16/16	1530
[illegible]	TA	2/16/16	1715	[illegible]	TA-CHI	2/17/16	0745
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: 500-107641-7

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
48W 060 IL 38 ISGS #3011-22 (Foracres Landscaping)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.894714 (Decimal Degrees) Longitude: -88.548185 (-Decimal Degrees)

Identify how the lat/long data were determined:

☐ GPS ☒ Map Interpolation ☐ Photo Interpolation ☐ Survey ☐ Other

IEPA Site Number(s), if assigned: BOL: 894505013 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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.894714 Longitude: -88.548185

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 3011-22-B01 through B02 were sampled within the construction zone adjacent to ISGS #3011-22 (Foracres Landscaping). Refer to PSI Report for ISGS #3011-22 (Foracres Landscaping) including Table 4-4, and Figures 4-4A&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 J107641-7.

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.

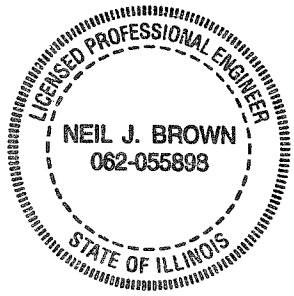
Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown
Printed Name:

Neil J. Brown 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.

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-23 (Residence)	Comparison Criteria			
BORING	3011-23-B01	MACs			TACO
SAMPLE	3011-23-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	**0.014** J	570	--	--	--
Acenaphthylene	**0.0076** J	--	--	--	--
Anthracene	**0.06**	12,000	--	--	--
Benzo[a]anthracene	**0.31**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.31** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.46**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.26**	--	--	--	--
Benzo[k]fluoranthene	**0.18**	9	--	--	--
Chrysene	**0.47**	88	--	--	--
Fluoranthene	**0.61**	3,100	--	--	--
Fluorene	**0.017** J	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.28**	0.9	1.6	0.9	--
Phenanthrene	**0.39**	--	--	--	--
Pyrene	**1.7**	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	**1.3**	11.3	13	--	--
Barium	**11**	1,500	--	--	--
Beryllium	**0.19** J	22	--	--	--
Boron	**1.8** J	40	--	--	--
Calcium	**8,800**	--	--	--	--
Chromium	**4.2**	21	--	--	--
Cobalt	**2.1**	20	--	--	--
Copper	**4.8**	2,900	--	--	--
Iron	**4,100**	15,000	15,900	--	--
Lead	**2.4**	107	--	--	--
Magnesium	**5,400**	325,000	--	--	--
Manganese	**88**	630	636	--	--
Mercury	**0.0099** J	0.89	--	--	--
Nickel	**6**	100	--	--	--
Potassium	**410**	--	--	--	--
Sodium	**110**	--	--	--	--
Vanadium	**4.6**	550	--	--	--
Zinc	**9.6**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45** J	--	--	--	2
Boron	**0.45** J	--	--	--	2
Manganese	**2.5** L	--	--	--	0.15
Nickel	**0.012** J	--	--	--	0.1
Zinc	**0.89**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	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 #3011-22 (Foracres Landscaping)		Comparison Criteria			
BORING	3011-22-B02		MACs			TACO
SAMPLE	3011-22-B02 (0-1)		Most Stringent	Within an MSA	Within Chicago	SCGIER
MATRIX	Soil					
DEPTH (feet)	0-1					
pH	8.4					
VOCs (None Detected)						
SVOCs (mg/kg)						
Anthracene	**0.033**	**J**	12,000	--	--	--
Benzo[a]anthracene	**0.15**		0.9	1.8	1.1	--
Benzo[a]pyrene	**0.21**	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.38**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.31**		--	--	--	--
Benzo[k]fluoranthene	**0.15**		9	--	--	--
Chrysene	**0.25**		88	--	--	--
Dibenzo(a,h)anthracene	**0.083**		0.09	0.42	0.2	--
Fluoranthene	**0.22**		3,100	--	--	--
Fluorene	**0.0087**	**J**	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.21**		0.9	1.6	0.9	--
Phenanthrene	**0.14**		--	--	--	--
Pyrene	**0.57**		2,300	--	--	--
Inorganics (mg/kg)						
Arsenic	**2**		11.3	13	--	--
Barium	**23**		1,500	--	--	--
Beryllium	**0.21**	**J**	22	--	--	--
Boron	**9.3**		40	--	--	--
Cadmium	**0.053**	**J**	5.2	--	--	--
Calcium	**180,000**		--	--	--	--
Chromium	**6.5**		21	--	--	--
Cobalt	**2.9**		20	--	--	--
Copper	**11**		2,900	--	--	--
Iron	**6,000**		15,000	15,900	--	--
Lead	**22**		107	--	--	--
Magnesium	**110,000**		325,000	--	--	--
Manganese	**300**		630	636	--	--
Mercury	**0.013**	**J**	0.89	--	--	--
Nickel	**7**		100	--	--	--
Potassium	**520**		--	--	--	--
Sodium	**800**		--	--	--	--
Vanadium	**8.4**		550	--	--	--
Zinc	**28**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.33**	**J**	--	--	--	2
Boron	**0.35**	**J**	--	--	--	2
Cobalt	ND	U	--	--	--	1
Iron	ND	U	--	--	--	5
Manganese	**2.2**	**L**	--	--	--	0.15
Nickel	ND	U	--	--	--	0.1
Zinc	**0.13**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.19**	**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: 500-107641-7
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:
3/1/2016 5:26:45 PM
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Designee for

Richard Wright, Senior Project Manager
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Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-7

Job ID: 500-107641-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-7

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-22-B02 (0-1) (500-107641-20), 3011-22-B01 (0-1) (500-107641-21), (500-107641-E-1-D MS), (500-107641-E-1-E MSD), (500-107641-E-21-B MS) and (500-107641-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 500-324173 and analytical batch 500-324528 contained Calcium and Magnesium above the reporting limit (RL). Associated sample 3011-22-B01 (0-1) (500-107641-21) 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 500-324170 and analytical batch 500-324562 contained 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) 7470A: The continuing calibration verification (CCV) associated with batch 500-324121 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 500-324121/23).

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: 500-107641-7

Client Sample ID: 3011-22-B02 (0-1) — Lab Sample ID: 500-107641-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.0087	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.033	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.22		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.57		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.25		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.38		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.15		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.21		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.083		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.31		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.0		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	23		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.21	J	0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	9.3		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.053	J	0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	180000	B	110	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	6.5	B	0.57	0.098	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.9		0.29	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	6000	B	11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	22		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	110000	B	57	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.0		0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	800		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.4		0.29	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	28		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.33	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.13	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.19		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.017	0.0090	mg/Kg	1	☼	7471B	Total/NA
pH	8.40		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-22-B01 (0-1) — Lab Sample ID: 500-107641-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.037		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0061	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.070	F1	0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15	F1	0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.047		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.072		0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.097		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.042		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107641-7

Client Sample ID: 3011-22-B01 (0-1) (Continued)

Lab Sample ID: 500-107641-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.063		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.031	J	0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.053		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.1		0.55	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	50		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.67		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	7.2		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	17		0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.28	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	21		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	17000		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000		5.5	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	370		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	31		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	1800		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Sodium	500		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	49		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.48	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	2.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.47	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.11		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.56		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-20	3011-22-B02 (0-1)	Solid	02/16/16 11:10	02/17/16 07:45
500-107641-21	3011-22-B01 (0-1)	Solid	02/16/16 11:15	02/17/16 07:45

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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	☼	02/17/16 08:40	02/23/16 13:28	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Bromodichloromethane	<0.0048		0.0048	0.00081	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Bromoform	<0.0048		0.0048	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chloroform	<0.0048		0.0048	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chloromethane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1-Dichloroethane	<0.0048		0.0048	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1-Dichloroethene	<0.0048		0.0048	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Xylenes, Total	<0.0096		0.0096	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/17/16 08:40*	*02/23/16 13:28*	*1*
Dibromofluoromethane	*106*		*75 - 120*	*02/17/16 08:40*	*02/23/16 13:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 134*	*02/17/16 08:40*	*02/23/16 13:28*	*1*
Toluene-d8 (Surr)	*111*		*75 - 122*	*02/17/16 08:40*	*02/23/16 13:28*	*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	☼	02/22/16 06:59	02/28/16 20:05	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Fluorene	**0.0087**	**J**	0.038	0.0054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Phenanthrene	**0.14**		0.038	0.0054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Anthracene	**0.033**	**J**	0.038	0.0064	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Fluoranthene	**0.22**		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Pyrene	**0.57**		0.038	0.0076	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[a]anthracene	**0.15**		0.038	0.0052	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.25**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[b]fluoranthene	**0.38**		0.038	0.0083	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[k]fluoranthene	**0.15**		0.038	0.011	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[a]pyrene	**0.21**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Indeno[1,2,3-cd]pyrene	**0.21**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Dibenz(a,h)anthracene	**0.083**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[g,h,i]perylene	**0.31**		0.038	0.012	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*76*		*25 - 110*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
Phenol-d5	*73*		*31 - 110*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
Nitrobenzene-d5	*71*		*25 - 115*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
2-Fluorobiphenyl	*75*		*25 - 119*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
Terphenyl-d14	*190*	*X*	*36 - 134*	*02/22/16 06:59*	*02/28/16 20:05*	*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	☼	02/23/16 16:44	02/26/16 04:34	1
Arsenic	**2.0**		0.57	0.26	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Barium	**23**		0.57	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Beryllium	**0.21**	**J**	0.23	0.049	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Boron	**9.3**		2.9	0.40	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Cadmium	**0.053**	**J**	0.11	0.033	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Calcium	**180000**	**B**	110	37	mg/Kg	☼	02/23/16 16:44	02/26/16 06:30	10
Chromium	**6.5**	**B**	0.57	0.098	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Cobalt	**2.9**		0.29	0.064	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Copper	**11**		0.57	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Iron	**6000**	**B**	11	4.4	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Lead	**22**		0.29	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Magnesium	**110000**	**B**	57	23	mg/Kg	☼	02/23/16 16:44	02/26/16 06:30	10
Manganese	**300**		0.57	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Nickel	**7.0**		0.57	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Potassium	**520**		29	4.7	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Selenium	<0.57		0.57	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Silver	<0.29		0.29	0.067	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Sodium	**800**		57	7.5	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Vanadium	**8.4**		0.29	0.083	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Zinc	**28**		1.1	0.36	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.33**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:59	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 22:59	1
Boron	**0.35**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:59	1

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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		02/21/16 16:00	02/23/16 22:59	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 22:59	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 22:59	1
Manganese	**2.2**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 22:59	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Zinc	**0.13**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 22:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.19**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 05:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 20:59	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 20:59	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		02/22/16 15:15	02/23/16 11:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.013**	**J**	0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.40**		0.200	0.200	SU			02/19/16 20:01	1

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

TestAmerica Job ID: 500-107641-7

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
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	0.0034	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Benzene	<0.0044		0.0044	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Bromodichloromethane	<0.0044		0.0044	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Bromoform	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Carbon tetrachloride	<0.0044		0.0044	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chloroethane	<0.0044		0.0044	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chloroform	<0.0044		0.0044	0.00086	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Chloromethane	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Dibromochloromethane	<0.0044		0.0044	0.00051	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1-Dichloroethane	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,2-Dichloroethane	<0.0044		0.0044	0.00065	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,2-Dichloropropane	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,3-Dichloropropene, Total	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Methylene Chloride	<0.0044		0.0044	0.0033	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00070	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Tetrachloroethene	<0.0044		0.0044	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Vinyl acetate	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Vinyl chloride	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1
Xylenes, Total	<0.0088		0.0088	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 122*	*02/17/16 08:40*	*02/23/16 13:53*	*1*
Dibromofluoromethane	*107*		*75 - 120*	*02/17/16 08:40*	*02/23/16 13:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 134*	*02/17/16 08:40*	*02/23/16 13:53*	*1*
Toluene-d8 (Surr)	*111*		*75 - 122*	*02/17/16 08:40*	*02/23/16 13:53*	*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	☼	02/18/16 18:29	02/26/16 16:48	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
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	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachloroethane	<0.18	F1	0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachlorocyclopentadiene	<0.73	F1	0.73	0.21	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dinitrophenol	<0.73	F1	0.73	0.64	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Pentachlorophenol	<0.73	F1	0.73	0.58	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
4,6-Dinitro-2-methylphenol	<0.73	F1	0.73	0.29	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Phenanthrene	**0.037**		0.036	0.0050	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Anthracene	**0.0061**	**J**	0.036	0.0060	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Fluoranthene	**0.070**	**F1**	0.036	0.0067	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Pyrene	**0.15**	**F1**	0.036	0.0072	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Butyl benzyl phthalate	<0.18	F1	0.18	0.069	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[a]anthracene	**0.047**		0.036	0.0049	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.072**		0.036	0.0098	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Di-n-octyl phthalate	<0.18	F1	0.18	0.059	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[b]fluoranthene	**0.097**		0.036	0.0078	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[k]fluoranthene	**0.042**		0.036	0.011	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[a]pyrene	**0.063**		0.036	0.0070	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Indeno[1,2,3-cd]pyrene	**0.031**	**J**	0.036	0.0093	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
Benzo[g,h,i]perylene	**0.053**		0.036	0.012	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 18:29	02/26/16 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*74*		*25 - 110*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
Phenol-d5	*75*		*31 - 110*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
Nitrobenzene-d5	*73*		*25 - 115*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
2-Fluorobiphenyl	*75*		*25 - 119*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
2,4,6-Tribromophenol	*85*		*35 - 137*	*02/18/16 18:29*	*02/26/16 16:48*	*1*
Terphenyl-d14	*148*	*X*	*36 - 134*	*02/18/16 18:29*	*02/26/16 16:48*	*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	☼	02/23/16 16:49	02/25/16 20:02	1
Arsenic	**5.1**		0.55	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Barium	**50**		0.55	0.10	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Beryllium	**0.67**		0.22	0.048	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Boron	**7.2**		2.8	0.39	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Cadmium	<0.11		0.11	0.032	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Calcium	**150000**	**B**	110	36	mg/Kg	☼	02/23/16 16:49	02/26/16 15:00	10
Chromium	**17**		0.55	0.095	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Cobalt	**11**		0.28	0.062	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Copper	**21**		0.55	0.12	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Iron	**17000**		11	4.3	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Lead	**12**		0.28	0.14	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Magnesium	**24000**		5.5	2.2	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Manganese	**370**		0.55	0.11	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Nickel	**31**		0.55	0.15	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Potassium	**1800**		28	4.5	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Selenium	**0.35**	**J**	0.55	0.27	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Sodium	**500**		55	7.3	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Vanadium	**20**		0.28	0.081	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	1
Zinc	**49**		1.1	0.35	mg/Kg	☼	02/23/16 16:49	02/25/16 20:02	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		02/21/16 16:00	02/22/16 19:57	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/22/16 19:57	1
Boron	**0.48**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/22/16 19:57	1

Client Sample ID: 3011-22-B01 (0-1)
Date Collected: 02/16/16 11:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-21
Matrix: Solid
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		02/21/16 16:00	02/22/16 19:57	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Cobalt	**0.013**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/22/16 19:57	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/22/16 19:57	1
Manganese	**2.7**		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Nickel	**0.016**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/22/16 19:57	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 19:57	1
Zinc	**0.47**	**J**	0.50	0.020	mg/L		02/21/16 16:00	02/22/16 19:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.11**		0.025	0.010	mg/L		02/23/16 09:23	02/25/16 05:43	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		02/21/16 16:00	02/22/16 18:36	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 18:36	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 10:46	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	☼	02/23/16 15:15	02/24/16 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.56**		0.200	0.200	SU			02/19/16 20:11	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-7

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
F1	MS and/or MSD Recovery is outside acceptance 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.
¤	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: 500-107641-7

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

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

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

Chain of Custody Record

Lab Job #: 500-107641
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 100934.000E.01
Project Name: IL38
Project Location/State: Kane County, IL
Lab Project #: 500IE64
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	SVOC	Total TAL Metals	TCLP SPLP TAL Metals	pH/% Solids	Comments
20		3011-22-B02(0-1)	2/16	1110	2	S		X	X	X	X	X	
21		3011-22-B01(0-1)	2/16	1115	2	S		X	X	X	X	X	

2-16-16

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
[illegible]	EE	2/16/16	1530	[illegible]	TA	2/16/16	1530
[illegible]	TA	2/16/16	1715	[illegible]	TA-CHI	2/17/16	0745
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: 500-107641-7

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
48W 018-058 IL 38 ISGS #3011-23 (Residence)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89474913 (Decimal Degrees) Longitude: -88.54682841 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89474913 Longitude: -88.54682841

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 3011-23-B01 and 3011-22-B02 was sampled within the construction zone adjacent to ISGS #3011-23 (Residence). Refer to PSI Report for ISGS #3011-23 (Residence) including Table 4-4, and Figures 4-4A&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 J107641-8 and J107641-7.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-23 (Residence)	Comparison Criteria			
BORING	3011-23-B01	MACs			TACO
SAMPLE	3011-23-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	**0.014** J	570	--	--	--
Acenaphthylene	**0.0076** J	--	--	--	--
Anthracene	**0.06**	12,000	--	--	--
Benzo[a]anthracene	**0.31**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.31** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.46**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.26**	--	--	--	--
Benzo[k]fluoranthene	**0.18**	9	--	--	--
Chrysene	**0.47**	88	--	--	--
Fluoranthene	**0.61**	3,100	--	--	--
Fluorene	**0.017** J	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.28**	0.9	1.6	0.9	--
Phenanthrene	**0.39**	--	--	--	--
Pyrene	**1.7**	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	**1.3**	11.3	13	--	--
Barium	**11**	1,500	--	--	--
Beryllium	**0.19** J	22	--	--	--
Boron	**1.8** J	40	--	--	--
Calcium	**8,800**	--	--	--	--
Chromium	**4.2**	21	--	--	--
Cobalt	**2.1**	20	--	--	--
Copper	**4.8**	2,900	--	--	--
Iron	**4,100**	15,000	15,900	--	--
Lead	**2.4**	107	--	--	--
Magnesium	**5,400**	325,000	--	--	--
Manganese	**88**	630	636	--	--
Mercury	**0.0099** J	0.89	--	--	--
Nickel	**6**	100	--	--	--
Potassium	**410**	--	--	--	--
Sodium	**110**	--	--	--	--
Vanadium	**4.6**	550	--	--	--
Zinc	**9.6**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45** J	--	--	--	2
Boron	**0.45** J	--	--	--	2
Manganese	**2.5** L	--	--	--	0.15
Nickel	**0.012** J	--	--	--	0.1
Zinc	**0.89**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	ND U	--	--	--	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: 500-107641-7
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:
3/1/2016 5:26:45 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-7

Job ID: 500-107641-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-7

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-22-B02 (0-1) (500-107641-20), 3011-22-B01 (0-1) (500-107641-21), (500-107641-E-1-D MS), (500-107641-E-1-E MSD), (500-107641-E-21-B MS) and (500-107641-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 500-324173 and analytical batch 500-324528 contained Calcium and Magnesium above the reporting limit (RL). Associated sample 3011-22-B01 (0-1) (500-107641-21) 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 500-324170 and analytical batch 500-324562 contained 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) 7470A: The continuing calibration verification (CCV) associated with batch 500-324121 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 500-324121/23).

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: 500-107641-7

Client Sample ID: 3011-22-B02 (0-1)

Lab Sample ID: 500-107641-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.0087	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.033	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.22		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.57		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.25		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.38		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.15		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.21		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.083		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.31		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.0		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	23		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.21	J	0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	9.3		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.053	J	0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	180000	B	110	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	6.5	B	0.57	0.098	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.9		0.29	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	6000	B	11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	22		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	110000	B	57	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.0		0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	800		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.4		0.29	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	28		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.33	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.13	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.19		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.017	0.0090	mg/Kg	1	☼	7471B	Total/NA
pH	8.40		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-20	3011-22-B02 (0-1)	Solid	02/16/16 11:10	02/17/16 07:45

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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	☼	02/17/16 08:40	02/23/16 13:28	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Bromodichloromethane	<0.0048		0.0048	0.00081	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Bromoform	<0.0048		0.0048	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chloroform	<0.0048		0.0048	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Chloromethane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1-Dichloroethane	<0.0048		0.0048	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1-Dichloroethene	<0.0048		0.0048	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1
Xylenes, Total	<0.0096		0.0096	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/17/16 08:40*	*02/23/16 13:28*	*1*
Dibromofluoromethane	*106*		*75 - 120*	*02/17/16 08:40*	*02/23/16 13:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 134*	*02/17/16 08:40*	*02/23/16 13:28*	*1*
Toluene-d8 (Surr)	*111*		*75 - 122*	*02/17/16 08:40*	*02/23/16 13:28*	*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	☼	02/22/16 06:59	02/28/16 20:05	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Fluorene	**0.0087**	**J**	0.038	0.0054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Phenanthrene	**0.14**		0.038	0.0054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Anthracene	**0.033**	**J**	0.038	0.0064	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Fluoranthene	**0.22**		0.038	0.0071	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Pyrene	**0.57**		0.038	0.0076	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[a]anthracene	**0.15**		0.038	0.0052	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.25**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[b]fluoranthene	**0.38**		0.038	0.0083	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[k]fluoranthene	**0.15**		0.038	0.011	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[a]pyrene	**0.21**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Indeno[1,2,3-cd]pyrene	**0.21**		0.038	0.010	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Dibenz(a,h)anthracene	**0.083**		0.038	0.0074	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
Benzo[g,h,i]perylene	**0.31**		0.038	0.012	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 06:59	02/28/16 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*76*		*25 - 110*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
Phenol-d5	*73*		*31 - 110*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
Nitrobenzene-d5	*71*		*25 - 115*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
2-Fluorobiphenyl	*75*		*25 - 119*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/22/16 06:59*	*02/28/16 20:05*	*1*
Terphenyl-d14	*190*	*X*	*36 - 134*	*02/22/16 06:59*	*02/28/16 20:05*	*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	☼	02/23/16 16:44	02/26/16 04:34	1
Arsenic	**2.0**		0.57	0.26	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Barium	**23**		0.57	0.10	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Beryllium	**0.21**	**J**	0.23	0.049	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Boron	**9.3**		2.9	0.40	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Cadmium	**0.053**	**J**	0.11	0.033	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Calcium	**180000**	**B**	110	37	mg/Kg	☼	02/23/16 16:44	02/26/16 06:30	10
Chromium	**6.5**	**B**	0.57	0.098	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Cobalt	**2.9**		0.29	0.064	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Copper	**11**		0.57	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Iron	**6000**	**B**	11	4.4	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Lead	**22**		0.29	0.14	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Magnesium	**110000**	**B**	57	23	mg/Kg	☼	02/23/16 16:44	02/26/16 06:30	10
Manganese	**300**		0.57	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Nickel	**7.0**		0.57	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Potassium	**520**		29	4.7	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Selenium	<0.57		0.57	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Silver	<0.29		0.29	0.067	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Sodium	**800**		57	7.5	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Vanadium	**8.4**		0.29	0.083	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1
Zinc	**28**		1.1	0.36	mg/Kg	☼	02/23/16 16:44	02/26/16 04:34	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.33**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:59	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 22:59	1
Boron	**0.35**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:59	1

Client Sample ID: 3011-22-B02 (0-1)
Date Collected: 02/16/16 11:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-20
Matrix: Solid
Percent Solids: 84.5

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		02/21/16 16:00	02/23/16 22:59	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 22:59	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 22:59	1
Manganese	**2.2**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Nickel	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 22:59	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:59	1
Zinc	**0.13**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 22:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.19**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 05:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 20:59	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 20:59	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		02/22/16 15:15	02/23/16 11:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.013**	**J**	0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.40**		0.200	0.200	SU			02/19/16 20:01	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-7

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
F1	MS and/or MSD Recovery is outside acceptance 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.
¤	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: 500-107641-7

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

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

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

Chain of Custody Record

Lab Job #: 500-107641
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 100934.000E.01
Project Name: IL38
Project Location/State: Kane County, IL
Lab Project #: 500IE64
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	SVOC	Total TAL Metals	TCLP SPLP TAL Metals	pH/% Solids	Comments
20		3011-22-B02(0-1)	2/16	1110	2	S		X	X	X	X	X	
21		3011-22-B01(0-1)	2/16	1115	2	S		X	X	X	X	X	

2-16-16

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
[illegible]	EE	2/16/16	1530	[illegible]	TA	2/16/16	1530
[illegible]	TA	2/16/16	1715	[illegible]	TA-CHI	2/17/16	0745
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: 500-107641-7

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107641-8
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:
3/1/2016 5:27:18 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

Table of Contents

Detection Summary

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

TestAmerica Job ID: 500-107641-8

Client Sample ID: 3011-23-B01 (0-1)

Lab Sample ID: 500-107641-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0076	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.014	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.017	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.39		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.060		0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.61		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.7		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.31		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.47		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.46		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.18		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.31		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.28		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.26		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	1.3		0.52	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	11		0.52	0.095	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.19	J	0.21	0.045	mg/Kg	1	☼	6010B	Total/NA
Boron	1.8	J	2.6	0.36	mg/Kg	1	☼	6010B	Total/NA
Calcium	8800		10	3.4	mg/Kg	1	☼	6010B	Total/NA
Chromium	4.2		0.52	0.089	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.1		0.26	0.059	mg/Kg	1	☼	6010B	Total/NA
Copper	4.8		0.52	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	4100		10	4.0	mg/Kg	1	☼	6010B	Total/NA
Lead	2.4		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	5400		5.2	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	88		0.52	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.0		0.52	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	410		26	4.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	110		52	6.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	4.6		0.26	0.076	mg/Kg	1	☼	6010B	Total/NA
Zinc	9.6		1.0	0.33	mg/Kg	1	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.5		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.89		0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.0099	J	0.018	0.0094	mg/Kg	1	☼	7471B	Total/NA
pH	8.29		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-22	3011-23-B01 (0-1)	Solid	02/16/16 11:05	02/17/16 07:45

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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	☼	02/17/16 08:40	02/23/16 14:18	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Bromoform	<0.0046		0.0046	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
2-Butanone (MEK)	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Carbon tetrachloride	<0.0046		0.0046	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chloroethane	<0.0046		0.0046	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chloroform	<0.0046		0.0046	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1-Dichloroethane	<0.0046		0.0046	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,2-Dichloroethane	<0.0046		0.0046	0.00069	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Ethylbenzene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Tetrachloroethene	<0.0046		0.0046	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Trichloroethene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Xylenes, Total	<0.0093		0.0093	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/17/16 08:40*	*02/23/16 14:18*	*1*
Dibromofluoromethane	*105*		*75 - 120*	*02/17/16 08:40*	*02/23/16 14:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 134*	*02/17/16 08:40*	*02/23/16 14:18*	*1*
Toluene-d8 (Surr)	*107*		*75 - 122*	*02/17/16 08:40*	*02/23/16 14:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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 18:29	02/26/16 21:44	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Acenaphthylene	**0.0076**	**J**	0.036	0.0048	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Acenaphthene	**0.014**	**J**	0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Fluorene	**0.017**	**J**	0.036	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachlorobenzene	<0.074		0.074	0.0084	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Pentachlorophenol	<0.74		0.74	0.58	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Phenanthrene	**0.39**		0.036	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Anthracene	**0.060**		0.036	0.0061	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Fluoranthene	**0.61**		0.036	0.0068	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Pyrene	**1.7**		0.036	0.0072	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[a]anthracene	**0.31**		0.036	0.0049	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.47**		0.036	0.0099	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[b]fluoranthene	**0.46**		0.036	0.0079	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[k]fluoranthene	**0.18**		0.036	0.011	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[a]pyrene	**0.31**		0.036	0.0071	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Indeno[1,2,3-cd]pyrene	**0.28**		0.036	0.0094	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[g,h,i]perylene	**0.26**		0.036	0.012	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*67*		*25 - 110*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
Phenol-d5	*71*		*31 - 110*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
Nitrobenzene-d5	*65*		*25 - 115*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
2-Fluorobiphenyl	*79*		*25 - 119*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
2,4,6-Tribromophenol	*77*		*35 - 137*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
Terphenyl-d14	*184*	*X*	*36 - 134*	*02/18/16 18:29*	*02/26/16 21:44*	*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	☼	02/23/16 16:49	02/25/16 20:06	1
Arsenic	**1.3**		0.52	0.24	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Barium	**11**		0.52	0.095	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Beryllium	**0.19**	**J**	0.21	0.045	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Boron	**1.8**	**J**	2.6	0.36	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Cadmium	<0.10		0.10	0.030	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Calcium	**8800**		10	3.4	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Chromium	**4.2**		0.52	0.089	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Cobalt	**2.1**		0.26	0.059	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Copper	**4.8**		0.52	0.11	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Iron	**4100**		10	4.0	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Lead	**2.4**		0.26	0.13	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Magnesium	**5400**		5.2	2.1	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Manganese	**88**		0.52	0.10	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Nickel	**6.0**		0.52	0.14	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Potassium	**410**		26	4.2	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Selenium	<0.52		0.52	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Silver	<0.26		0.26	0.061	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Sodium	**110**		52	6.9	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Vanadium	**4.6**		0.26	0.076	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Zinc	**9.6**		1.0	0.33	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	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		02/21/16 16:00	02/22/16 20:04	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/22/16 20:04	1
Boron	**0.45**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/22/16 20:04	1

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

TestAmerica Job ID: 500-107641-8

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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		02/21/16 16:00	02/22/16 20:04	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/22/16 20:04	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/22/16 20:04	1
Manganese	**2.5**		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Nickel	**0.012**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/22/16 20:04	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Zinc	**0.89**		0.50	0.020	mg/L		02/21/16 16:00	02/22/16 20:04	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		02/23/16 09:23	02/25/16 05:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 18:40	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 18:40	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 10:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0099**	**J**	0.018	0.0094	mg/Kg	☼	02/23/16 15:15	02/24/16 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.29**		0.200	0.200	SU			02/19/16 20:21	1

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.
^	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.
¤	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: 500-107641-8

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 #: 500-107641
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0008.01
Project Name: FC 38
Project Location/State: Kane County, IL
Lab Project #: 50011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP(SPLP?) TAL metals	pH/% Solids					Comments
22		3011-23-D01 (0-1)	2-16-16	1105	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	[signature] Neal	TA	2/16/16	1530
[signature] Neal	TA	2/16/16	1715	[signature] Scott	TA-CHI	2/17/16	0745

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:

TAL-4124-500 (0209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107641-8

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
47W 885 IL 38 ISGS #3011-24 (Farmstead)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.8948 (Decimal Degrees) Longitude: -88.544997 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.8948 Longitude: -88.544997

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 3011-24-B01, 3011-24-B02, and 3011-23-B01 were sampled within the construction zone adjacent to ISGS #3011-24 (Farmstead). Refer to PSI Report for ISGS #3011-24 (Farmstead) including Table 4-4, and Figures 4-4A&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 J107641-9, and J107641-8.

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:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-24 (Farmstead)		Comparison Criteria			
BORING	3011-24-B01	3011-24-B02	MACs			TACO
SAMPLE	3011-24-B01 (0-1)	3011-24-B02 (0-1)				
MATRIX	Soil	Soil				
DEPTH (feet)	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.61	8.42				
VOCs (None Detected)						
SVOCs (mg/kg)						
Anthracene	**0.016 J**	ND U	12,000	--	--	--
Benzo[a]anthracene	**0.067**	**0.023 J**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.069**	**0.035 J**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.11**	**0.072**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.09**	**0.023 J**	--	--	--	--
Benzo[k]fluoranthene	**0.051**	**0.025 J**	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	**0.074 J**	46	--	--	--
Chrysene	**0.085**	**0.036**	88	--	--	--
Fluoranthene	**0.085**	**0.047**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.07**	**0.016 J**	0.9	1.6	0.9	--
Phenanthrene	**0.074**	**0.023 J**	--	--	--	--
Pyrene	**0.23**	**0.079**	2,300	--	--	--
Inorganics (mg/kg)						
Antimony	**3.7**	ND U	5	--	--	--
Arsenic	**11**	**5.4**	11.3	13	--	--
Barium	**150**	**52**	1,500	--	--	--
Beryllium	**3.1**	**0.73**	22	--	--	--
Boron	**45** †	**8.3**	40	--	--	--
Cadmium	**2.1**	ND U	5.2	--	--	--
Calcium	**120,000**	**150,000**	--	--	--	--
Chromium	**32** †	**18**	21	--	--	--
Cobalt	**45** †	**14**	20	--	--	--
Copper	**36**	**22**	2,900	--	--	--
Iron	**21,000 †m**	**17,000 †m**	15,000	15,900	--	--
Lead	**20**	**13**	107	--	--	--
Magnesium	**27,000**	**25,000**	325,000	--	--	--
Manganese	**450**	**390**	630	636	--	--
Mercury	**0.016 J**	ND U	0.89	--	--	--
Nickel	**72**	**36**	100	--	--	--
Potassium	**4,000**	**2,200**	--	--	--	--
Selenium	**4** †	ND U	1.3	--	--	--
Silver	**2.1**	ND U	4.4	--	--	--
Sodium	**1,100**	**520**	--	--	--	--
Thallium	**5.2** †	ND U	2.6	--	--	--
Vanadium	**49**	**20**	550	--	--	--
Zinc	**93**	**52**	5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.35 J**	**0.27 J**	--	--	--	2
Boron	**0.47 J**	**0.41 J**	--	--	--	2
Chromium	ND U	ND U	--	--	--	0.1
Cobalt	ND U	ND U	--	--	--	1
Lead	ND U	**0.0095 L**	--	--	--	0.0075
Manganese	**1.2 L**	**1.5 L**	--	--	--	0.15
Nickel	**0.011 J**	**0.015 J**	--	--	--	0.1
Selenium	ND U	ND U	--	--	--	0.05
Thallium	ND U	ND U	--	--	--	0.002
Zinc	**0.61**	**0.12 J**	--	--	--	5
SPLP Metals (mg/L)						
Lead	NA	ND U	--	--	--	0.0075
Manganese	**0.16 L**	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 #3011-23 (Residence)	Comparison Criteria			
BORING	3011-23-B01	MACs			TACO
SAMPLE	3011-23-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthene	**0.014** J	570	--	--	--
Acenaphthylene	**0.0076** J	--	--	--	--
Anthracene	**0.06**	12,000	--	--	--
Benzo[a]anthracene	**0.31**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.31** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.46**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.26**	--	--	--	--
Benzo[k]fluoranthene	**0.18**	9	--	--	--
Chrysene	**0.47**	88	--	--	--
Fluoranthene	**0.61**	3,100	--	--	--
Fluorene	**0.017** J	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.28**	0.9	1.6	0.9	--
Phenanthrene	**0.39**	--	--	--	--
Pyrene	**1.7**	2,300	--	--	--
Inorganics (mg/kg)					
Arsenic	**1.3**	11.3	13	--	--
Barium	**11**	1,500	--	--	--
Beryllium	**0.19** J	22	--	--	--
Boron	**1.8** J	40	--	--	--
Calcium	**8,800**	--	--	--	--
Chromium	**4.2**	21	--	--	--
Cobalt	**2.1**	20	--	--	--
Copper	**4.8**	2,900	--	--	--
Iron	**4,100**	15,000	15,900	--	--
Lead	**2.4**	107	--	--	--
Magnesium	**5,400**	325,000	--	--	--
Manganese	**88**	630	636	--	--
Mercury	**0.0099** J	0.89	--	--	--
Nickel	**6**	100	--	--	--
Potassium	**410**	--	--	--	--
Sodium	**110**	--	--	--	--
Vanadium	**4.6**	550	--	--	--
Zinc	**9.6**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45** J	--	--	--	2
Boron	**0.45** J	--	--	--	2
Manganese	**2.5** L	--	--	--	0.15
Nickel	**0.012** J	--	--	--	0.1
Zinc	**0.89**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	ND U	--	--	--	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: 500-107641-8
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:
3/1/2016 5:27:18 PM
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Table of Contents

Detection Summary

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

TestAmerica Job ID: 500-107641-8

Client Sample ID: 3011-23-B01 (0-1)

Lab Sample ID: 500-107641-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0076	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.014	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.017	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.39		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.060		0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.61		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.7		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.31		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.47		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.46		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.18		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.31		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.28		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.26		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	1.3		0.52	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	11		0.52	0.095	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.19	J	0.21	0.045	mg/Kg	1	☼	6010B	Total/NA
Boron	1.8	J	2.6	0.36	mg/Kg	1	☼	6010B	Total/NA
Calcium	8800		10	3.4	mg/Kg	1	☼	6010B	Total/NA
Chromium	4.2		0.52	0.089	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.1		0.26	0.059	mg/Kg	1	☼	6010B	Total/NA
Copper	4.8		0.52	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	4100		10	4.0	mg/Kg	1	☼	6010B	Total/NA
Lead	2.4		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	5400		5.2	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	88		0.52	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.0		0.52	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	410		26	4.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	110		52	6.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	4.6		0.26	0.076	mg/Kg	1	☼	6010B	Total/NA
Zinc	9.6		1.0	0.33	mg/Kg	1	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.5		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.89		0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.0099	J	0.018	0.0094	mg/Kg	1	☼	7471B	Total/NA
pH	8.29		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-22	3011-23-B01 (0-1)	Solid	02/16/16 11:05	02/17/16 07:45

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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	☼	02/17/16 08:40	02/23/16 14:18	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Bromoform	<0.0046		0.0046	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
2-Butanone (MEK)	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Carbon tetrachloride	<0.0046		0.0046	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chloroethane	<0.0046		0.0046	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chloroform	<0.0046		0.0046	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1-Dichloroethane	<0.0046		0.0046	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,2-Dichloroethane	<0.0046		0.0046	0.00069	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Ethylbenzene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Tetrachloroethene	<0.0046		0.0046	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Trichloroethene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1
Xylenes, Total	<0.0093		0.0093	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/17/16 08:40*	*02/23/16 14:18*	*1*
Dibromofluoromethane	*105*		*75 - 120*	*02/17/16 08:40*	*02/23/16 14:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 134*	*02/17/16 08:40*	*02/23/16 14:18*	*1*
Toluene-d8 (Surr)	*107*		*75 - 122*	*02/17/16 08:40*	*02/23/16 14:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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 18:29	02/26/16 21:44	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Acenaphthylene	**0.0076**	**J**	0.036	0.0048	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Acenaphthene	**0.014**	**J**	0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Fluorene	**0.017**	**J**	0.036	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Hexachlorobenzene	<0.074		0.074	0.0084	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Pentachlorophenol	<0.74		0.74	0.58	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Phenanthrene	**0.39**		0.036	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Anthracene	**0.060**		0.036	0.0061	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Fluoranthene	**0.61**		0.036	0.0068	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Pyrene	**1.7**		0.036	0.0072	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[a]anthracene	**0.31**		0.036	0.0049	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.47**		0.036	0.0099	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[b]fluoranthene	**0.46**		0.036	0.0079	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[k]fluoranthene	**0.18**		0.036	0.011	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[a]pyrene	**0.31**		0.036	0.0071	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Indeno[1,2,3-cd]pyrene	**0.28**		0.036	0.0094	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
Benzo[g,h,i]perylene	**0.26**		0.036	0.012	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/26/16 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*67*		*25 - 110*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
Phenol-d5	*71*		*31 - 110*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
Nitrobenzene-d5	*65*		*25 - 115*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
2-Fluorobiphenyl	*79*		*25 - 119*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
2,4,6-Tribromophenol	*77*		*35 - 137*	*02/18/16 18:29*	*02/26/16 21:44*	*1*
Terphenyl-d14	*184*	*X*	*36 - 134*	*02/18/16 18:29*	*02/26/16 21:44*	*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	☼	02/23/16 16:49	02/25/16 20:06	1
Arsenic	**1.3**		0.52	0.24	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Barium	**11**		0.52	0.095	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Beryllium	**0.19**	**J**	0.21	0.045	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Boron	**1.8**	**J**	2.6	0.36	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Cadmium	<0.10		0.10	0.030	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Calcium	**8800**		10	3.4	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Chromium	**4.2**		0.52	0.089	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Cobalt	**2.1**		0.26	0.059	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Copper	**4.8**		0.52	0.11	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Iron	**4100**		10	4.0	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Lead	**2.4**		0.26	0.13	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Magnesium	**5400**		5.2	2.1	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Manganese	**88**		0.52	0.10	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Nickel	**6.0**		0.52	0.14	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Potassium	**410**		26	4.2	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Selenium	<0.52		0.52	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Silver	<0.26		0.26	0.061	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Sodium	**110**		52	6.9	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Vanadium	**4.6**		0.26	0.076	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	1
Zinc	**9.6**		1.0	0.33	mg/Kg	☼	02/23/16 16:49	02/25/16 20:06	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		02/21/16 16:00	02/22/16 20:04	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/22/16 20:04	1
Boron	**0.45**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/22/16 20:04	1

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

TestAmerica Job ID: 500-107641-8

Client Sample ID: 3011-23-B01 (0-1)
Date Collected: 02/16/16 11:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-22
Matrix: Solid
Percent Solids: 88.5

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		02/21/16 16:00	02/22/16 20:04	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/22/16 20:04	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/22/16 20:04	1
Manganese	**2.5**		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Nickel	**0.012**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/22/16 20:04	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:04	1
Zinc	**0.89**		0.50	0.020	mg/L		02/21/16 16:00	02/22/16 20:04	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		02/23/16 09:23	02/25/16 05:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 18:40	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 18:40	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 10:48	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0099**	**J**	0.018	0.0094	mg/Kg	☼	02/23/16 15:15	02/24/16 09:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.29**		0.200	0.200	SU			02/19/16 20:21	1

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.
^	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.
¤	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: 500-107641-8

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 #: 500-107641
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0008.01
Project Name: FC 3 8
Project Location/State: Kane County, IL
Lab Project #: 50011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	TCLP TAL metals	TCLP VOC/SVOC TAL metals	pH/% Solids					Comments
22		3011-23-D01 (0-1)	2-16-16	1105	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

2-16-16

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
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	[signature]	TA-CHI	2/17/16	0745

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:

TAL-4124-500 (0209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107641-8

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107641-9
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:
3/1/2016 5:27:43 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

Table of Contents

Job ID: 500-107641-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-9

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-24-B01 (0-1) (500-107641-24). 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 500-324173 and analytical batch 500-324528 contained Calcium and Magnesium above the reporting limit (RL). Associated samples 3011-24-B02 (0-1) (500-107641-23) and 3011-24-B01 (0-1) (500-107641-24) 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: 500-107641-9

Client Sample ID: 3011-24-B02 (0-1) — Lab Sample ID: 500-107641-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.023	J	0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.047		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.079		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.023	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.036		0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.074	J	0.18	0.066	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.072		0.036	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.025	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.035	J	0.036	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.016	J	0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.023	J	0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.4		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	52		0.50	0.092	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.73		0.20	0.044	mg/Kg	1	☼	6010B	Total/NA
Boron	8.3		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	100	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	18		0.50	0.087	mg/Kg	1	☼	6010B	Total/NA
Cobalt	14		0.25	0.057	mg/Kg	1	☼	6010B	Total/NA
Copper	22		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	17000		10	3.9	mg/Kg	1	☼	6010B	Total/NA
Lead	13		0.25	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000		5.0	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	390		0.50	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	36		0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	2200		25	4.1	mg/Kg	1	☼	6010B	Total/NA
Sodium	520		50	6.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.25	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	52		1.0	0.32	mg/Kg	1	☼	6010B	Total/NA
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.41	J	0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.0095		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	1.5		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.12	J	0.50	0.020	mg/L	1		6010B	TCLP
pH	8.42		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-24-B01 (0-1) — Lab Sample ID: 500-107641-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.074		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.016	J	0.038	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.085		0.038	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.23		0.038	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.067		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.085		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.051		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.069		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.070		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.090		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107641-9

Client Sample ID: 3011-24-B01 (0-1) (Continued)

Lab Sample ID: 500-107641-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	3.7		1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	11		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	150		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	3.1		0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	45		2.8	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	2.1		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	32		0.57	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	45		0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	36		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	21000		11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	20		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	27000		5.7	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	450		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	72		0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	4000		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	4.0		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Silver	2.1		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Thallium	5.2		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Vanadium	49		0.28	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	93		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.47	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.61		0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.16		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.018	0.0093	mg/Kg	1	☼	7471B	Total/NA
pH	8.61		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107641-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-23	3011-24-B02 (0-1)	Solid	02/16/16 10:45	02/17/16 07:45
500-107641-24	3011-24-B01 (0-1)	Solid	02/16/16 10:55	02/17/16 07:45

Client Sample ID: 3011-24-B02 (0-1)
Date Collected: 02/16/16 10:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-23
Matrix: Solid
Percent Solids: 92.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0031	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Benzene	<0.0040		0.0040	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Bromodichloromethane	<0.0040		0.0040	0.00068	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Bromoform	<0.0040		0.0040	0.00082	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
2-Butanone (MEK)	<0.0040		0.0040	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Carbon disulfide	<0.0040		0.0040	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Carbon tetrachloride	<0.0040		0.0040	0.00086	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Chlorobenzene	<0.0040		0.0040	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Chloroethane	<0.0040		0.0040	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Chloroform	<0.0040		0.0040	0.00079	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Chloromethane	<0.0040		0.0040	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
cis-1,2-Dichloroethene	<0.0040		0.0040	0.00082	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
cis-1,3-Dichloropropene	<0.0040		0.0040	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Dibromochloromethane	<0.0040		0.0040	0.00046	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,1-Dichloroethane	<0.0040		0.0040	0.00083	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,2-Dichloroethane	<0.0040		0.0040	0.00060	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,1-Dichloroethene	<0.0040		0.0040	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,2-Dichloropropane	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,3-Dichloropropene, Total	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Ethylbenzene	<0.0040		0.0040	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
2-Hexanone	<0.0040		0.0040	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Methylene Chloride	<0.0040		0.0040	0.0030	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.00083	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Methyl tert-butyl ether	<0.0040		0.0040	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Styrene	<0.0040		0.0040	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,1,2,2-Tetrachloroethane	<0.0040		0.0040	0.00064	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Tetrachloroethene	<0.0040		0.0040	0.00084	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Toluene	<0.0040		0.0040	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
trans-1,2-Dichloroethene	<0.0040		0.0040	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
trans-1,3-Dichloropropene	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,1,1-Trichloroethane	<0.0040		0.0040	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
1,1,2-Trichloroethane	<0.0040		0.0040	0.00078	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Trichloroethene	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Vinyl acetate	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Vinyl chloride	<0.0040		0.0040	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1
Xylenes, Total	<0.0081		0.0081	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/17/16 08:40*	*02/23/16 14:44*	*1*
Dibromofluoromethane	*104*		*75 - 120*	*02/17/16 08:40*	*02/23/16 14:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 134*	*02/17/16 08:40*	*02/23/16 14:44*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/17/16 08:40*	*02/23/16 14:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.080	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1

Client Sample ID: 3011-24-B02 (0-1)
Date Collected: 02/16/16 10:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-23
Matrix: Solid
Percent Solids: 92.3

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 18:29	02/28/16 22:50	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Pentachlorophenol	<0.72		0.72	0.58	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Phenanthrene	**0.023**	**J**	0.036	0.0050	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Anthracene	<0.036		0.036	0.0060	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Fluoranthene	**0.047**		0.036	0.0067	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Pyrene	**0.079**		0.036	0.0071	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Benzo[a]anthracene	**0.023**	**J**	0.036	0.0048	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1

Client Sample ID: 3011-24-B02 (0-1)
Date Collected: 02/16/16 10:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-23
Matrix: Solid
Percent Solids: 92.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.036**		0.036	0.0098	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Bis(2-ethylhexyl) phthalate	**0.074**	**J**	0.18	0.066	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Benzo[b]fluoranthene	**0.072**		0.036	0.0077	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Benzo[k]fluoranthene	**0.025**	**J**	0.036	0.011	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Benzo[a]pyrene	**0.035**	**J**	0.036	0.0069	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Indeno[1,2,3-cd]pyrene	**0.016**	**J**	0.036	0.0093	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
Benzo[g,h,i]perylene	**0.023**	**J**	0.036	0.012	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 18:29	02/28/16 22:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/18/16 18:29*	*02/28/16 22:50*	*1*
Phenol-d5	*80*		*31 - 110*	*02/18/16 18:29*	*02/28/16 22:50*	*1*
Nitrobenzene-d5	*62*		*25 - 115*	*02/18/16 18:29*	*02/28/16 22:50*	*1*
2-Fluorobiphenyl	*68*		*25 - 119*	*02/18/16 18:29*	*02/28/16 22:50*	*1*
2,4,6-Tribromophenol	*62*		*35 - 137*	*02/18/16 18:29*	*02/28/16 22:50*	*1*
Terphenyl-d14	*129*		*36 - 134*	*02/18/16 18:29*	*02/28/16 22:50*	*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	☼	02/23/16 16:49	02/25/16 20:10	1
Arsenic	**5.4**		0.50	0.23	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Barium	**52**		0.50	0.092	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Beryllium	**0.73**		0.20	0.044	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Boron	**8.3**		2.5	0.35	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Cadmium	<0.10		0.10	0.029	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Calcium	**150000**	**B**	100	32	mg/Kg	☼	02/23/16 16:49	02/26/16 15:04	10
Chromium	**18**		0.50	0.087	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Cobalt	**14**		0.25	0.057	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Copper	**22**		0.50	0.11	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Iron	**17000**		10	3.9	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Lead	**13**		0.25	0.13	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Magnesium	**25000**		5.0	2.0	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Manganese	**390**		0.50	0.10	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Nickel	**36**		0.50	0.14	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Potassium	**2200**		25	4.1	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Selenium	<0.50		0.50	0.25	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Silver	<0.25		0.25	0.059	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Sodium	**520**		50	6.6	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Vanadium	**20**		0.25	0.073	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	1
Zinc	**52**		1.0	0.32	mg/Kg	☼	02/23/16 16:49	02/25/16 20:10	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		02/21/16 16:00	02/22/16 20:26	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/22/16 20:26	1
Boron	**0.41**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/22/16 20:26	1

Client Sample ID: 3011-24-B02 (0-1)
Date Collected: 02/16/16 10:45
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-23
Matrix: Solid
Percent Solids: 92.3

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		02/21/16 16:00	02/22/16 20:26	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:26	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:26	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/22/16 20:26	1
Lead	**0.0095**		0.0075	0.0075	mg/L		02/21/16 16:00	02/22/16 20:26	1
Manganese	**1.5**		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:26	1
Nickel	**0.015**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:26	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/22/16 20:26	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:26	1
Zinc	**0.12**	**J**	0.50	0.020	mg/L		02/21/16 16:00	02/22/16 20:26	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		02/23/16 09:23	02/25/16 05:57	1
Manganese	<0.025		0.025	0.010	mg/L		02/23/16 09:23	02/25/16 05:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 18:44	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 18:44	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 10:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0087	mg/Kg	☼	02/23/16 15:15	02/24/16 09:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.42**		0.200	0.200	SU			02/19/16 20:31	1

Client Sample ID: 3011-24-B01 (0-1)
Date Collected: 02/16/16 10:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-24
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0034	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Benzene	<0.0044		0.0044	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Bromodichloromethane	<0.0044		0.0044	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Bromoform	<0.0044		0.0044	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Carbon tetrachloride	<0.0044		0.0044	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Chloroethane	<0.0044		0.0044	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Chloroform	<0.0044		0.0044	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Chloromethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Dibromochloromethane	<0.0044		0.0044	0.00050	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,1-Dichloroethane	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,2-Dichloroethane	<0.0044		0.0044	0.00065	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,2-Dichloropropane	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,3-Dichloropropene, Total	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Methylene Chloride	<0.0044		0.0044	0.0033	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00069	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Tetrachloroethene	<0.0044		0.0044	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Vinyl acetate	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Vinyl chloride	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1
Xylenes, Total	<0.0087		0.0087	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/17/16 08:40*	*02/23/16 15:09*	*1*
Dibromofluoromethane	*107*		*75 - 120*	*02/17/16 08:40*	*02/23/16 15:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 134*	*02/17/16 08:40*	*02/23/16 15:09*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/17/16 08:40*	*02/23/16 15:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.086	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
1,4-Dichlorobenzene	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1

Client Sample ID: 3011-24-B01 (0-1)
Date Collected: 02/16/16 10:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-24
Matrix: Solid
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	<0.19		0.19	0.046	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
N-Nitrosodiphenylamine	<0.19		0.19	0.046	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Phenanthrene	**0.074**		0.038	0.0054	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Anthracene	**0.016**	**J**	0.038	0.0065	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Carbazole	<0.19		0.19	0.097	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Fluoranthene	**0.085**		0.038	0.0072	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Pyrene	**0.23**		0.038	0.0077	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Benzo[a]anthracene	**0.067**		0.038	0.0052	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1

Client Sample ID: 3011-24-B01 (0-1)
Date Collected: 02/16/16 10:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-24
Matrix: Solid
Percent Solids: 85.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.085**		0.038	0.011	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Benzo[b]fluoranthene	**0.11**		0.038	0.0083	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Benzo[k]fluoranthene	**0.051**		0.038	0.011	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Benzo[a]pyrene	**0.069**		0.038	0.0075	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Indeno[1,2,3-cd]pyrene	**0.070**		0.038	0.010	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0075	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
Benzo[g,h,i]perylene	**0.090**		0.038	0.012	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/18/16 18:29	02/26/16 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*63*		*25 - 110*	*02/18/16 18:29*	*02/26/16 22:14*	*1*
Phenol-d5	*71*		*31 - 110*	*02/18/16 18:29*	*02/26/16 22:14*	*1*
Nitrobenzene-d5	*68*		*25 - 115*	*02/18/16 18:29*	*02/26/16 22:14*	*1*
2-Fluorobiphenyl	*78*		*25 - 119*	*02/18/16 18:29*	*02/26/16 22:14*	*1*
2,4,6-Tribromophenol	*70*		*35 - 137*	*02/18/16 18:29*	*02/26/16 22:14*	*1*
Terphenyl-d14	*173*	*X*	*36 - 134*	*02/18/16 18:29*	*02/26/16 22:14*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**3.7**		1.1	0.23	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Arsenic	**11**		0.57	0.26	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Barium	**150**		0.57	0.10	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Beryllium	**3.1**		0.23	0.049	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Boron	**45**		2.8	0.40	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Cadmium	**2.1**		0.11	0.033	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Calcium	**120000**	**B**	110	36	mg/Kg	☼	02/23/16 16:49	02/26/16 15:16	10
Chromium	**32**		0.57	0.097	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Cobalt	**45**		0.28	0.064	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Copper	**36**		0.57	0.12	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Iron	**21000**		11	4.4	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Lead	**20**		0.28	0.14	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Magnesium	**27000**		5.7	2.3	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Manganese	**450**		0.57	0.11	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Nickel	**72**		0.57	0.15	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Potassium	**4000**		28	4.6	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Selenium	**4.0**		0.57	0.28	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Silver	**2.1**		0.28	0.066	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Sodium	**1100**		57	7.5	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Thallium	**5.2**		0.57	0.28	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Vanadium	**49**		0.28	0.083	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	1
Zinc	**93**		1.1	0.36	mg/Kg	☼	02/23/16 16:49	02/25/16 20:15	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		02/21/16 16:00	02/22/16 20:33	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/22/16 20:33	1
Boron	**0.47**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/22/16 20:33	1

Client Sample ID: 3011-24-B01 (0-1)
Date Collected: 02/16/16 10:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-24
Matrix: Solid
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		02/21/16 16:00	02/22/16 20:33	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:33	1
Cobalt	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:33	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/22/16 20:33	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/22/16 20:33	1
Manganese	**1.2**		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:33	1
Nickel	**0.011**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:33	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/22/16 20:33	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/22/16 20:33	1
Zinc	**0.61**		0.50	0.020	mg/L		02/21/16 16:00	02/22/16 20:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.16**		0.025	0.010	mg/L		02/23/16 09:23	02/25/16 06:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/21/16 16:00	02/22/16 18:48	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 18:48	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		02/22/16 15:15	02/23/16 10:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.016**	**J**	0.018	0.0093	mg/Kg	☼	02/23/16 15:15	02/24/16 10:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.61**		0.200	0.200	SU			02/19/16 20:40	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107641-9

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.
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: 500-107641-9

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

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

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

Chain of Custody Record

Lab Job #: 500-107641
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.000&01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 50011864
Sampler: S. Cooper
Lab PM: D. wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solid	Comments
23		3011-24-B02(01)	2-16-16	1045	2	S	X	X	X	X	X	
24		3011-24-B01(01)	2-16-16	1055	2	S	X	X	X	X	X	

2-16-16

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
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
P. Neal	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107641-9

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, incldluding number and street):
47W 831-885 IL 38 ISGS #3011-25 (Residences)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Kaneville

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

Latitude: 41.894634 (Decimal Degrees) Longitude: -88.543059 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.894634 Longitude: -88.543059

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 3011-25-B02, 3011-18-B11, and 3011-27-B01 was sampled within the construction zone adjacent to ISGS #3011-25 (Residences). Refer to PSI Report for ISGS #3011-25 (Residences) including Table 4-4, and Figures 4-4A&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 J107642-1, J107641-3, and J107642-3.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-25 (Residences)		Comparison Criteria			
BORING	3011-25-B02		MACs			TACO
SAMPLE	3011-25-B02 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.79					
VOCs (None Detected)						
SVOCs (mg/kg)						
Acenaphthylene	ND	U	--	--	--	--
Benzo[a]anthracene	**0.029**	**J**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.048**		0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.065**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.085**		--	--	--	--
Benzo[k]fluoranthene	**0.031**	**J**	9	--	--	--
Chrysene	**0.042**		88	--	--	--
Fluoranthene	**0.035**	**J**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.048**		0.9	1.6	0.9	--
Phenanthrene	**0.022**	**J**	--	--	--	--
Pyrene	**0.1**		2,300	--	--	--
Inorganics (mg/kg)						
Antimony	**0.31**	**J**	5	--	--	--
Arsenic	**4.1**		11.3	13	--	--
Barium	**23**		1,500	--	--	--
Beryllium	**0.26**		22	--	--	--
Boron	**12**		40	--	--	--
Cadmium	**0.14**		5.2	--	--	--
Calcium	**140,000**		--	--	--	--
Chromium	**24**	†	21	--	--	--
Cobalt	**4.3**		20	--	--	--
Copper	**8.3**		2,900	--	--	--
Iron	**8,100**		15,000	15,900	--	--
Lead	**100**		107	--	--	--
Magnesium	**83,000**		325,000	--	--	--
Manganese	**300**		630	636	--	--
Mercury	**0.014**	**J**	0.89	--	--	--
Nickel	**9.7**		100	--	--	--
Potassium	**800**		--	--	--	--
Selenium	**0.36**	**J**	1.3	--	--	--
Sodium	**970**		--	--	--	--
Vanadium	**11**		550	--	--	--
Zinc	**33**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.36**	**J**	--	--	--	2
Boron	**0.084**	**J**	--	--	--	2
Chromium	ND	U	--	--	--	0.1
Cobalt	**0.011**	**J**	--	--	--	1
Manganese	**3.9**	**L**	--	--	--	0.15
Nickel	**0.011**	**J**	--	--	--	0.1
Zinc	**0.12**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.9**	**L**	--	--	--	0.15

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

SITE	ISGS #3011-18 (Agricultural Land)	Comparison Criteria			
BORING	3011-18-B11	MACs			TACO
SAMPLE	3011-18-B11 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.7				
VOCs (mg/kg)					
2-Butanone (MEK)	ND U	--	--	--	--
Acetone	ND U	25	--	--	--
SVOCs (mg/kg)					
Acenaphthylene	ND U	--	--	--	--
Anthracene	ND U	12,000	--	--	--
Benzo[a]anthracene	**0.016 J**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.021 J**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.04**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.018 J**	--	--	--	--
Benzo[k]fluoranthene	**0.018 J**	9	--	--	--
Chrysene	**0.021 J**	88	--	--	--
Dibenzo(a,h)anthracene	ND U	0.09	0.42	0.2	--
Fluoranthene	**0.03 J**	3,100	--	--	--
Fluorene	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.018 J**	0.9	1.6	0.9	--
Phenanthrene	**0.016 J**	--	--	--	--
Pyrene	**0.046**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	ND U	5	--	--	--
Arsenic	**4.8**	11.3	13	--	--
Barium	**46**	1,500	--	--	--
Beryllium	**0.35**	22	--	--	--
Boron	**5**	40	--	--	--
Cadmium	**0.14**	5.2	--	--	--
Calcium	**90,000**	--	--	--	--
Chromium	**9.7**	21	--	--	--
Cobalt	**6.2**	20	--	--	--
Copper	**11**	2,900	--	--	--
Iron	**9,500**	15,000	15,900	--	--
Lead	**33**	107	--	--	--
Magnesium	**37,000**	325,000	--	--	--
Manganese	**350**	630	636	--	--
Mercury	**0.02**	0.89	--	--	--
Nickel	**12**	100	--	--	--
Potassium	**690**	--	--	--	--
Selenium	ND U	1.3	--	--	--
Sodium	**1,300**	--	--	--	--
Vanadium	**14**	550	--	--	--
Zinc	**48**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.42 J**	--	--	--	2
Boron	**0.22 J**	--	--	--	2
Chromium	ND U	--	--	--	0.1
Cobalt	**0.018 J**	--	--	--	1
Lead	ND U	--	--	--	0.0075
Manganese	**4.2 L**	--	--	--	0.15
Nickel	**0.013 J**	--	--	--	0.1
Zinc	**0.21 J**	--	--	--	5
SPLP Metals (mg/L)					
Lead	NA	--	--	--	0.0075
Manganese	**0.92 L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-27 (Vineyard)	Comparison Criteria			
BORING	3011-27-B01	MACs			TACO
SAMPLE	3011-27-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.93				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.01 J**	12,000	--	--	--
Benzo[a]anthracene	**0.045**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.074**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.12**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.078**	--	--	--	--
Benzo[k]fluoranthene	**0.036**	9	--	--	--
Chrysene	**0.065**	88	--	--	--
Fluoranthene	**0.084**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.055**	0.9	1.6	0.9	--
Phenanthrene	**0.047**	--	--	--	--
Pyrene	**0.15**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.44 J**	5	--	--	--
Arsenic	**2.3**	11.3	13	--	--
Barium	**13**	1,500	--	--	--
Beryllium	**0.19 J**	22	--	--	--
Boron	**8.2**	40	--	--	--
Cadmium	**0.12**	5.2	--	--	--
Calcium	**180,000**	--	--	--	--
Chromium	**15**	21	--	--	--
Cobalt	**2.7**	20	--	--	--
Copper	**7.3**	2,900	--	--	--
Iron	**6,000**	15,000	15,900	--	--
Lead	**69**	107	--	--	--
Magnesium	**100,000**	325,000	--	--	--
Manganese	**260**	630	636	--	--
Nickel	**6.7**	100	--	--	--
Potassium	**520**	--	--	--	--
Sodium	**570**	--	--	--	--
Vanadium	**8.7**	550	--	--	--
Zinc	**30**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.19 J**	--	--	--	2
Boron	**0.63**	--	--	--	2
Manganese	**1.2 L**	--	--	--	0.15
Zinc	**0.25 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.034**	--	--	--	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: 500-107641-3
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:
3/1/2016 5:24:43 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107641-3

Job ID: 500-107641-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107641-3

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-323872: 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 associated with 500-324044: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-18-B01 (0-1) (500-107641-9), 3011-18-B05 (0-1) (500-107641-12), 3011-18-B07 (0-1) (500-107641-13), 3011-18-B10 (0-1) (500-107641-15), 3011-18-B11 (0-1) (500-107641-16), (500-107641-E-1-D MS) and (500-107641-E-1-E 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 500-324170 and analytical batch 500-324562 contained 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) 6020A: The continuing calibration verification (CCV) associated with batch 500-324078, at lines 88 and 92 recovered above the upper control limit for Thallium. The affected samples were 500-107641-11 through 20. Also the CCVL at line 94 was outside the upper control limit for Thallium. The samples associated with these CCV and CCVL were non-detects for the affected analytes, therefore the samples were 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: 500-107641-3

Client Sample ID: 3011-18-B11 (0-1)

Lab Sample ID: 500-107641-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.016	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.030	J	0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.046		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.016	J	0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.021	J	0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.040		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.018	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.021	J	0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.018	J	0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.018	J	0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.8		0.54	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	46		0.54	0.099	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.35		0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	5.0		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	90000	B	110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.7	B	0.54	0.093	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.2		0.27	0.061	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.54	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	9500	B	11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	33		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	37000	B	5.4	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	350		0.54	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	690		27	4.4	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		54	7.1	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.27	0.079	mg/Kg	1	☼	6010B	Total/NA
Zinc	48		1.1	0.34	mg/Kg	1	☼	6010B	Total/NA
Barium	0.42	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.22	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.018	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	4.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.21	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.92		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.020		0.017	0.0090	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.

Sample Summary

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

TestAmerica Job ID: 500-107641-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107641-16	3011-18-B11 (0-1)	Solid	02/16/16 13:50	02/17/16 07:45

Client Sample ID: 3011-18-B11 (0-1)
Date Collected: 02/16/16 13:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-16
Matrix: Solid
Percent Solids: 88.6

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	☼	02/17/16 08:40	02/23/16 11:47	1
Benzene	<0.0045		0.0045	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Bromodichloromethane	<0.0045		0.0045	0.00075	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Bromoform	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Bromomethane	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Carbon disulfide	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Chloroform	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Dibromochloromethane	<0.0045		0.0045	0.00051	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,1-Dichloroethane	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,2-Dichloroethane	<0.0045		0.0045	0.00066	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Styrene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1
Xylenes, Total	<0.0089		0.0089	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 122*	*02/17/16 08:40*	*02/23/16 11:47*	*1*
Dibromofluoromethane	*105*		*75 - 120*	*02/17/16 08:40*	*02/23/16 11:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 134*	*02/17/16 08:40*	*02/23/16 11:47*	*1*
Toluene-d8 (Surr)	*109*		*75 - 122*	*02/17/16 08:40*	*02/23/16 11:47*	*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	☼	02/22/16 06:59	03/01/16 04:15	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1

Client Sample ID: 3011-18-B11 (0-1)
Date Collected: 02/16/16 13:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-16
Matrix: Solid
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	0.044	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,4,5-Trichlorophenol	<0.36		0.36	0.084	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2-Nitrophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Phenanthrene	**0.016**	**J**	0.036	0.0051	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Fluoranthene	**0.030**	**J**	0.036	0.0068	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Pyrene	**0.046**		0.036	0.0073	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Benzo[a]anthracene	**0.016**	**J**	0.036	0.0049	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1

Client Sample ID: 3011-18-B11 (0-1)
Date Collected: 02/16/16 13:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-16
Matrix: Solid
Percent Solids: 88.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.021**	**J**	0.036	0.010	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Benzo[b]fluoranthene	**0.040**		0.036	0.0079	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Benzo[k]fluoranthene	**0.018**	**J**	0.036	0.011	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Benzo[a]pyrene	**0.021**	**J**	0.036	0.0071	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Indeno[1,2,3-cd]pyrene	**0.018**	**J**	0.036	0.0095	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
Benzo[g,h,i]perylene	**0.018**	**J**	0.036	0.012	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 06:59	03/01/16 04:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*84*		*25 - 110*	*02/22/16 06:59*	*03/01/16 04:15*	*1*
Phenol-d5	*75*		*31 - 110*	*02/22/16 06:59*	*03/01/16 04:15*	*1*
Nitrobenzene-d5	*63*		*25 - 115*	*02/22/16 06:59*	*03/01/16 04:15*	*1*
2-Fluorobiphenyl	*68*		*25 - 119*	*02/22/16 06:59*	*03/01/16 04:15*	*1*
2,4,6-Tribromophenol	*63*		*35 - 137*	*02/22/16 06:59*	*03/01/16 04:15*	*1*
Terphenyl-d14	*141*	*X*	*36 - 134*	*02/22/16 06:59*	*03/01/16 04:15*	*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	☼	02/23/16 16:44	02/26/16 04:14	1
Arsenic	**4.8**		0.54	0.25	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Barium	**46**		0.54	0.099	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Beryllium	**0.35**		0.22	0.047	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Boron	**5.0**		2.7	0.38	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Cadmium	**0.14**		0.11	0.031	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Calcium	**90000**	**B**	110	35	mg/Kg	☼	02/23/16 16:44	02/26/16 06:13	10
Chromium	**9.7**	**B**	0.54	0.093	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Cobalt	**6.2**		0.27	0.061	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Copper	**11**		0.54	0.12	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Iron	**9500**	**B**	11	4.2	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Lead	**33**		0.27	0.13	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Magnesium	**37000**	**B**	5.4	2.2	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Manganese	**350**		0.54	0.11	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Nickel	**12**		0.54	0.15	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Potassium	**690**		27	4.4	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Selenium	<0.54		0.54	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Silver	<0.27		0.27	0.063	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Sodium	**1300**		54	7.1	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Vanadium	**14**		0.27	0.079	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1
Zinc	**48**		1.1	0.34	mg/Kg	☼	02/23/16 16:44	02/26/16 04:14	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.42**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:32	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/21/16 16:00	02/23/16 22:32	1
Boron	**0.22**	**J**	0.50	0.050	mg/L		02/21/16 16:00	02/23/16 22:32	1

Client Sample ID: 3011-18-B11 (0-1)
Date Collected: 02/16/16 13:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107641-16
Matrix: Solid
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		02/21/16 16:00	02/23/16 22:32	1
Chromium	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:32	1
Cobalt	**0.018**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:32	1
Iron	<0.40		0.40	0.20	mg/L		02/21/16 16:00	02/23/16 22:32	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/21/16 16:00	02/23/16 22:32	1
Manganese	**4.2**		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:32	1
Nickel	**0.013**	**J**	0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:32	1
Selenium	<0.050		0.050	0.020	mg/L		02/21/16 16:00	02/23/16 22:32	1
Silver	<0.025		0.025	0.010	mg/L		02/21/16 16:00	02/23/16 22:32	1
Zinc	**0.21**	**J B**	0.50	0.020	mg/L		02/21/16 16:00	02/23/16 22:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.92**		0.025	0.010	mg/L		02/23/16 09:20	02/25/16 04:54	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		02/21/16 16:00	02/22/16 20:35	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		02/21/16 16:00	02/22/16 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		02/22/16 15:15	02/23/16 11:28	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.020**		0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.70**		0.200	0.200	SU			02/19/16 19:22	1

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
^	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.
¤	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: 500-107641-3

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:
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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 #: 500-107641

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0016.01
Project Name: IC 38
Project Location/State: Kane County, IL
Lab Project #: 50011664
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total Metals	TCLP SPLP Metals	pH/% Solids					Comments
5		3011-18-B08 (0-1)	2/16/16	1130	2	S	X	X	X	X	X					
6		3011-18-B06 (0-1)	2-16-16	1135	2	S	X	X	X	X	X					
7		3011-18-B04 (0-1)	2-16-16	1140	2	S	X	X	X	X	X					
8		3011-18-B02 (0-1)	2-16-16	1145	2	S	X	X	X	X	X					
9		3011-18-B01 (0-1)	2/16/16	1250	2	S	X	X	X	X	X					
10		3011-18-B01 (0-1) D	2-16-16	1258	2	S	X	X	X	X	X					
11		3011-18-B03 (0-1)	2/16/16	1305	2	S	X	X	X	X	X					
12		3011-18-B05 (0-1)	2/16/16	1310	2	S	X	X	X	X	X					
13		3011-18-B07 (0-1)	2-16-16	1325	2	S	X	X	X	X	X					
14		3011-18-B09 (0-1)	2/16/16	1330	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
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
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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:

TAL-4124-500 (1209)

TestAmerica

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2417 Bond Street, University Park, IL 60484
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Address:
Phone:
Fax:
E-Mail:

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

Chain of Custody Record

Lab Job #: 500-107641
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 100 9741-0008.01
Project Name: IL 78
Project Location/State: Kane County, IL
Lab Project #: 500118464
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL Metals	TCLP/SPLP TAL Metals	pH/% Solids	Comments
						Preservative						
15		Soil-78-B10 (0-1)	2-16-16	1340	2	S	X	X	X	X	X	
16		Soil-18-B11 (0-1)	2-16-16	1350	2	S	X	X	X	X	X	

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
H. Neal	TA	2/16/16	1715	Shawn Scott	TA-CHI	2/17/16	0948

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: 500-107641-3

Login Number: 107641
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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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: 500-107642-1
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:
2/29/2016 5:01:21 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

Table of Contents

Job ID: 500-107642-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-1

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-25-B02 (0-1) (500-107642-2), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-25-B01 (0-1) (500-107642-1) and 3011-25-B02 (0-1) (500-107642-2), 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.

Client Sample ID: 3011-25-B02 (0-1)

Lab Sample ID: 500-107642-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.022	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.035	J	0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.10		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.029	J	0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.042		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.065		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.031	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-25-B02 (0-1) (Continued)

Lab Sample ID: 500-107642-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.048		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.048		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.085		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.31	J	1.0	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.1		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	23		0.50	0.091	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.26		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	12		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14		0.10	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000	B	100	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	24	B	0.50	0.086	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.3		0.25	0.056	mg/Kg	1	☼	6010B	Total/NA
Copper	8.3		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	8100	B	10	3.9	mg/Kg	1	☼	6010B	Total/NA
Lead	100		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	83000	B	50	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.50	0.099	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.7	B	0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	800		25	4.1	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.36	J	0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Sodium	970		50	6.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.25	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	33	B	5.0	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.36	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.084	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	3.9		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.12	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.90		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.014	J	0.017	0.0090	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.

Sample Summary

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

TestAmerica Job ID: 500-107642-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-2	3011-25-B02 (0-1)	Solid	02/16/16 14:05	02/17/16 07:45

Client Sample ID: 3011-25-B02 (0-1)
Date Collected: 02/16/16 14:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-2
Matrix: Solid
Percent Solids: 89.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0039	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Benzene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Bromodichloromethane	<0.0050		0.0050	0.00084	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Bromoform	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Bromomethane	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
2-Butanone (MEK)	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Carbon disulfide	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Carbon tetrachloride	<0.0050		0.0050	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Chlorobenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Chloroethane	<0.0050		0.0050	0.0021	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Chloroform	<0.0050		0.0050	0.00097	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Chloromethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
cis-1,2-Dichloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
cis-1,3-Dichloropropene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Dibromochloromethane	<0.0050		0.0050	0.00057	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,1-Dichloroethane	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,2-Dichloroethane	<0.0050		0.0050	0.00074	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,1-Dichloroethene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,2-Dichloropropane	<0.0050		0.0050	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,3-Dichloropropene, Total	<0.0050		0.0050	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Ethylbenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
2-Hexanone	<0.0050		0.0050	0.0015	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Methylene Chloride	<0.0050		0.0050	0.0038	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Methyl tert-butyl ether	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Styrene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,1,2,2-Tetrachloroethane	<0.0050		0.0050	0.00079	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Tetrachloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Toluene	<0.0050		0.0050	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
trans-1,2-Dichloroethene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
trans-1,3-Dichloropropene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,1,1-Trichloroethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
1,1,2-Trichloroethane	<0.0050		0.0050	0.00097	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Trichloroethene	<0.0050		0.0050	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Vinyl acetate	<0.0050		0.0050	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Vinyl chloride	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1
Xylenes, Total	<0.010		0.010	0.0018	mg/Kg	☼	02/17/16 08:40	02/22/16 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/17/16 08:40*	*02/22/16 18:32*	*1*
Dibromofluoromethane	*95*		*75 - 120*	*02/17/16 08:40*	*02/22/16 18:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 134*	*02/17/16 08:40*	*02/22/16 18:32*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/22/16 18:32*	*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	☼	02/22/16 07:04	02/27/16 20:19	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1

Client Sample ID: 3011-25-B02 (0-1)
Date Collected: 02/16/16 14:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-2
Matrix: Solid
Percent Solids: 89.5

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	☼	02/22/16 07:04	02/27/16 20:19	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4-Nitrophenol	<0.73		0.73	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Phenanthrene	**0.022**	**J**	0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Fluoranthene	**0.035**	**J**	0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Pyrene	**0.10**		0.036	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Benzo[a]anthracene	**0.029**	**J**	0.036	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1

Client Sample ID: 3011-25-B02 (0-1)
Date Collected: 02/16/16 14:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-2
Matrix: Solid
Percent Solids: 89.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.042**		0.036	0.0099	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Benzo[b]fluoranthene	**0.065**		0.036	0.0079	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Benzo[k]fluoranthene	**0.031**	**J**	0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Benzo[a]pyrene	**0.048**		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Indeno[1,2,3-cd]pyrene	**0.048**		0.036	0.0094	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
Benzo[g,h,i]perylene	**0.085**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*75*		*25 - 110*	*02/22/16 07:04*	*02/27/16 20:19*	*1*
Phenol-d5	*75*		*31 - 110*	*02/22/16 07:04*	*02/27/16 20:19*	*1*
Nitrobenzene-d5	*79*		*25 - 115*	*02/22/16 07:04*	*02/27/16 20:19*	*1*
2-Fluorobiphenyl	*80*		*25 - 119*	*02/22/16 07:04*	*02/27/16 20:19*	*1*
2,4,6-Tribromophenol	*80*		*35 - 137*	*02/22/16 07:04*	*02/27/16 20:19*	*1*
Terphenyl-d14	*193*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 20:19*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.31**	**J**	1.0	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Arsenic	**4.1**		0.50	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Barium	**23**		0.50	0.091	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Beryllium	**0.26**		0.20	0.043	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Boron	**12**		2.5	0.35	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Cadmium	**0.14**		0.10	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Calcium	**140000**	**B**	100	32	mg/Kg	☼	02/24/16 08:46	02/26/16 04:02	10
Chromium	**24**	**B**	0.50	0.086	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Cobalt	**4.3**		0.25	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Copper	**8.3**		0.50	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Iron	**8100**	**B**	10	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Lead	**100**		0.25	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Magnesium	**83000**	**B**	50	20	mg/Kg	☼	02/24/16 08:46	02/26/16 04:02	10
Manganese	**300**		0.50	0.099	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Nickel	**9.7**	**B**	0.50	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Potassium	**800**		25	4.1	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Selenium	**0.36**	**J**	0.50	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Silver	<0.25		0.25	0.058	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Sodium	**970**		50	6.6	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Vanadium	**11**		0.25	0.073	mg/Kg	☼	02/24/16 08:46	02/26/16 01:40	1
Zinc	**33**	**B**	5.0	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 15:26	5

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		02/23/16 09:14	02/24/16 19:37	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 19:37	1
Boron	**0.084**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 19:37	1

Client Sample ID: 3011-25-B02 (0-1)
Date Collected: 02/16/16 14:05
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-2
Matrix: Solid
Percent Solids: 89.5

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		02/23/16 09:14	02/24/16 19:37	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 19:37	1
Cobalt	**0.011**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 19:37	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 19:37	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 19:37	1
Manganese	**3.9**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 19:37	1
Nickel	**0.011**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 19:37	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 19:37	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 19:37	1
Zinc	**0.12**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 19:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.90**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 07:46	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		02/23/16 09:14	02/23/16 16:10	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 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		02/22/16 15:15	02/23/16 11:50	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.014**	**J**	0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.79**		0.200	0.200	SU			02/20/16 12:14	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-1

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
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.
¤	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: 500-107642-1

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 604..
Phone: 708.534.5200 Fax: 708.534..

500-107642 COC

Chain of Custody Record

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

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

Lab Job #: 500-107642
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler: 2.8, 2.5, 3.2, 3.5

Client: EE
Client Project #: 1009741.0008-01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 500 11664
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL Metals	TCLP/SPLP TAL Metals	pH/% Solids					Comments
1		3011-25-B01(0-1)	2-16-16	1400	2	S	X	X	X	X	X					
2		3011-25-B02(0-1)	2-16-16	1405	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

2-16-16

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
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0245

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:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107642-1

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107642-3
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:
2/29/2016 5:08:30 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

Table of Contents

Job ID: 500-107642-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-3

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

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

GC/MS Semi VOA
Method(s) 8270D: The following sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-27-B01 (0-1) (500-107642-5), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-27-B01 (0-1) (500-107642-5) and (500-107642-E-1-H) 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: 500-107642-3

Client Sample ID: 3011-27-B01 (0-1)

Lab Sample ID: 500-107642-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.047		0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.010	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.084		0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.045		0.035	0.0047	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.065		0.035	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.035	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.036		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.074		0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.055		0.035	0.0091	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.078		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.44	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.3		0.55	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	13		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.19	J	0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	8.2		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.12		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	180000	B	110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	15	B	0.55	0.094	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.7		0.27	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	7.3		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	6000	B	11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	69		0.27	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	100000	B	55	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	260		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.7	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		27	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	570		55	7.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.7		0.27	0.080	mg/Kg	1	☼	6010B	Total/NA
Zinc	30	B	5.5	1.7	mg/Kg	5	☼	6010B	Total/NA
Barium	0.19	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.63		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.034		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.

Sample Summary

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

TestAmerica Job ID: 500-107642-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-5	3011-27-B01 (0-1)	Solid	02/16/16 14:15	02/17/16 07:45

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Bromoform	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Carbon disulfide	<0.0045		0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Carbon tetrachloride	<0.0045		0.0045	0.00097	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chloroform	<0.0045		0.0045	0.00088	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1-Dichloroethane	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,2-Dichloroethane	<0.0045		0.0045	0.00067	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Styrene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00072	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Tetrachloroethene	<0.0045		0.0045	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/22/16 19:46*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/17/16 08:40*	*02/22/16 19:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 134*	*02/17/16 08:40*	*02/22/16 19:46*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/17/16 08:40*	*02/22/16 19:46*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.078	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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	☼	02/22/16 07:04	02/26/16 22:35	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Nitrobenzene	<0.035		0.035	0.0088	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Chloroaniline	<0.71		0.71	0.17	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Acenaphthylene	<0.035		0.035	0.0046	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Nitrophenol	<0.71		0.71	0.34	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachlorobenzene	<0.071		0.071	0.0082	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Pentachlorophenol	<0.71		0.71	0.57	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Phenanthrene	**0.047**		0.035	0.0049	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Anthracene	**0.010**	**J**	0.035	0.0059	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Carbazole	<0.18		0.18	0.088	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Fluoranthene	**0.084**		0.035	0.0065	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Pyrene	**0.15**		0.035	0.0070	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[a]anthracene	**0.045**		0.035	0.0047	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.065**		0.035	0.0096	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[b]fluoranthene	**0.12**		0.035	0.0076	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[k]fluoranthene	**0.036**		0.035	0.010	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[a]pyrene	**0.074**		0.035	0.0068	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Indeno[1,2,3-cd]pyrene	**0.055**		0.035	0.0091	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[g,h,i]perylene	**0.078**		0.035	0.011	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*89*		*25 - 110*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
Phenol-d5	*94*		*31 - 110*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
Nitrobenzene-d5	*84*		*25 - 115*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
2-Fluorobiphenyl	*76*		*25 - 119*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
2,4,6-Tribromophenol	*89*		*35 - 137*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
Terphenyl-d14	*161*	*X*	*36 - 134*	*02/22/16 07:04*	*02/26/16 22:35*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.44**	**J**	1.1	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Arsenic	**2.3**		0.55	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Barium	**13**		0.55	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Beryllium	**0.19**	**J**	0.22	0.047	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Boron	**8.2**		2.7	0.38	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Cadmium	**0.12**		0.11	0.032	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Calcium	**180000**	**B**	110	35	mg/Kg	☼	02/24/16 08:46	02/26/16 04:17	10
Chromium	**15**	**B**	0.55	0.094	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Cobalt	**2.7**		0.27	0.062	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Copper	**7.3**		0.55	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Iron	**6000**	**B**	11	4.2	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Lead	**69**		0.27	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Magnesium	**100000**	**B**	55	22	mg/Kg	☼	02/24/16 08:46	02/26/16 04:17	10
Manganese	**260**		0.55	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Nickel	**6.7**	**B**	0.55	0.15	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Potassium	**520**		27	4.5	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Silver	<0.27		0.27	0.064	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Sodium	**570**		55	7.2	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Vanadium	**8.7**		0.27	0.080	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Zinc	**30**	**B**	5.5	1.7	mg/Kg	☼	02/24/16 08:46	02/26/16 16:02	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.19**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 20:13	1
Boron	**0.63**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:13	1

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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		02/23/16 09:14	02/24/16 20:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 20:13	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 20:13	1
Manganese	**1.2**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 20:13	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Zinc	**0.25**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 20:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.034**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 08:08	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		02/23/16 09:14	02/23/16 16:22	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 16:22	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		02/22/16 15:15	02/23/16 12:03	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.016		0.016	0.0084	mg/Kg	☼	02/23/16 15:15	02/24/16 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.93**		0.200	0.200	SU			02/20/16 12:24	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-3

Qualifiers

GC/MS Semi VOA

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

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: 500-107642-3

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 #: 500-107642
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0000.E01
Project Name: FC38
Project Location/State: Icane County, IL
Lab Project #: Stoll, Eley
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	TCLP TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
5		3011-27-B01 (0-1)	2-16-16	1415	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

2-16-16

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
[signature]	EE	2-16-16	1530	R. Neal	TA	2/16/16	1530
R. Neal	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-3

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
47W 600 block of IL 38 ISGS #3011-27 (Vineyard)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Kaneville

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

Latitude: 41.89474282 (Decimal Degrees) Longitude: -88.54062671 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89474282 Longitude: -88.54062671

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 3011-27-B01 was sampled within the construction zone adjacent to ISGS #3011-27 (Vineyard). Refer to PSI Report for ISGS #3011-27 (Vineyard) including Table 4-4, and Figures 4-4A&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 J107642-3.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-27 (Vineyard)	Comparison Criteria			
BORING	3011-27-B01	MACs			TACO
SAMPLE	3011-27-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.93				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.01 J**	12,000	--	--	--
Benzo[a]anthracene	**0.045**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.074**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.12**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.078**	--	--	--	--
Benzo[k]fluoranthene	**0.036**	9	--	--	--
Chrysene	**0.065**	88	--	--	--
Fluoranthene	**0.084**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.055**	0.9	1.6	0.9	--
Phenanthrene	**0.047**	--	--	--	--
Pyrene	**0.15**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.44 J**	5	--	--	--
Arsenic	**2.3**	11.3	13	--	--
Barium	**13**	1,500	--	--	--
Beryllium	**0.19 J**	22	--	--	--
Boron	**8.2**	40	--	--	--
Cadmium	**0.12**	5.2	--	--	--
Calcium	**180,000**	--	--	--	--
Chromium	**15**	21	--	--	--
Cobalt	**2.7**	20	--	--	--
Copper	**7.3**	2,900	--	--	--
Iron	**6,000**	15,000	15,900	--	--
Lead	**69**	107	--	--	--
Magnesium	**100,000**	325,000	--	--	--
Manganese	**260**	630	636	--	--
Nickel	**6.7**	100	--	--	--
Potassium	**520**	--	--	--	--
Sodium	**570**	--	--	--	--
Vanadium	**8.7**	550	--	--	--
Zinc	**30**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.19 J**	--	--	--	2
Boron	**0.63**	--	--	--	2
Manganese	**1.2 L**	--	--	--	0.15
Zinc	**0.25 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.034**	--	--	--	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: 500-107642-3
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:
2/29/2016 5:08:30 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

Table of Contents

Job ID: 500-107642-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-3

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

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

GC/MS Semi VOA
Method(s) 8270D: The following sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-27-B01 (0-1) (500-107642-5), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-27-B01 (0-1) (500-107642-5) and (500-107642-E-1-H) 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: 500-107642-3

Client Sample ID: 3011-27-B01 (0-1)

Lab Sample ID: 500-107642-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.047		0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.010	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.084		0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.045		0.035	0.0047	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.065		0.035	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.035	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.036		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.074		0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.055		0.035	0.0091	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.078		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.44	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.3		0.55	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	13		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.19	J	0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	8.2		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.12		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	180000	B	110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	15	B	0.55	0.094	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.7		0.27	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	7.3		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	6000	B	11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	69		0.27	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	100000	B	55	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	260		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.7	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		27	4.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	570		55	7.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.7		0.27	0.080	mg/Kg	1	☼	6010B	Total/NA
Zinc	30	B	5.5	1.7	mg/Kg	5	☼	6010B	Total/NA
Barium	0.19	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.63		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.034		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.

Sample Summary

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

TestAmerica Job ID: 500-107642-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-5	3011-27-B01 (0-1)	Solid	02/16/16 14:15	02/17/16 07:45

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Bromoform	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Carbon disulfide	<0.0045		0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Carbon tetrachloride	<0.0045		0.0045	0.00097	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chloroform	<0.0045		0.0045	0.00088	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1-Dichloroethane	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,2-Dichloroethane	<0.0045		0.0045	0.00067	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Styrene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00072	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Tetrachloroethene	<0.0045		0.0045	0.00094	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/17/16 08:40	02/22/16 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/22/16 19:46*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/17/16 08:40*	*02/22/16 19:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 134*	*02/17/16 08:40*	*02/22/16 19:46*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/17/16 08:40*	*02/22/16 19:46*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.078	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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	☼	02/22/16 07:04	02/26/16 22:35	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Nitrobenzene	<0.035		0.035	0.0088	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Chloroaniline	<0.71		0.71	0.17	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Acenaphthylene	<0.035		0.035	0.0046	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Nitrophenol	<0.71		0.71	0.34	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Hexachlorobenzene	<0.071		0.071	0.0082	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Pentachlorophenol	<0.71		0.71	0.57	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Phenanthrene	**0.047**		0.035	0.0049	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Anthracene	**0.010**	**J**	0.035	0.0059	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Carbazole	<0.18		0.18	0.088	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Fluoranthene	**0.084**		0.035	0.0065	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Pyrene	**0.15**		0.035	0.0070	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[a]anthracene	**0.045**		0.035	0.0047	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.065**		0.035	0.0096	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[b]fluoranthene	**0.12**		0.035	0.0076	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[k]fluoranthene	**0.036**		0.035	0.010	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[a]pyrene	**0.074**		0.035	0.0068	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Indeno[1,2,3-cd]pyrene	**0.055**		0.035	0.0091	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
Benzo[g,h,i]perylene	**0.078**		0.035	0.011	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/26/16 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*89*		*25 - 110*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
Phenol-d5	*94*		*31 - 110*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
Nitrobenzene-d5	*84*		*25 - 115*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
2-Fluorobiphenyl	*76*		*25 - 119*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
2,4,6-Tribromophenol	*89*		*35 - 137*	*02/22/16 07:04*	*02/26/16 22:35*	*1*
Terphenyl-d14	*161*	*X*	*36 - 134*	*02/22/16 07:04*	*02/26/16 22:35*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.44**	**J**	1.1	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Arsenic	**2.3**		0.55	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Barium	**13**		0.55	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Beryllium	**0.19**	**J**	0.22	0.047	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Boron	**8.2**		2.7	0.38	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Cadmium	**0.12**		0.11	0.032	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Calcium	**180000**	**B**	110	35	mg/Kg	☼	02/24/16 08:46	02/26/16 04:17	10
Chromium	**15**	**B**	0.55	0.094	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Cobalt	**2.7**		0.27	0.062	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Copper	**7.3**		0.55	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Iron	**6000**	**B**	11	4.2	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Lead	**69**		0.27	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Magnesium	**100000**	**B**	55	22	mg/Kg	☼	02/24/16 08:46	02/26/16 04:17	10
Manganese	**260**		0.55	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Nickel	**6.7**	**B**	0.55	0.15	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Potassium	**520**		27	4.5	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Silver	<0.27		0.27	0.064	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Sodium	**570**		55	7.2	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Vanadium	**8.7**		0.27	0.080	mg/Kg	☼	02/24/16 08:46	02/26/16 02:03	1
Zinc	**30**	**B**	5.5	1.7	mg/Kg	☼	02/24/16 08:46	02/26/16 16:02	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.19**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 20:13	1
Boron	**0.63**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:13	1

Client Sample ID: 3011-27-B01 (0-1)
Date Collected: 02/16/16 14:15
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-5
Matrix: Solid
Percent Solids: 90.1

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		02/23/16 09:14	02/24/16 20:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 20:13	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 20:13	1
Manganese	**1.2**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 20:13	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:13	1
Zinc	**0.25**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 20:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.034**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 08:08	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		02/23/16 09:14	02/23/16 16:22	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 16:22	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		02/22/16 15:15	02/23/16 12:03	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.016		0.016	0.0084	mg/Kg	☼	02/23/16 15:15	02/24/16 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.93**		0.200	0.200	SU			02/20/16 12:24	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-3

Qualifiers

GC/MS Semi VOA

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

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: 500-107642-3

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 #: 500-107642
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.000 E01
Project Name: FC38
Project Location/State: Icane Lovely, TL
Lab Project #: 50011664
Sampler: S. Cooper
Lab PM: D. Wright

Parameter: VOC | SVOC | TCLP TAL metals | TCLP/SPLP TAL metals | pH/% Solids

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	TCLP TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
5		3011-27-B01 (0-1)	2-16-16	1415	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
P. Neal	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-3

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
47W 400 block of IL 38 ISGS #3011-28 (Agricultural Land)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.896778 (Decimal Degrees) Longitude: -88.532819 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.896778 Longitude: -88.532819

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 3011-28-B01 was sampled within the construction zone adjacent to ISGS #3011-28 (Agricultural Land). Refer to PSI Report for ISGS #3011-28 (Agricultural Land) including Table 4-4, and Figures 4-5A&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 J107642-4.

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:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-28 (Agricultural Land)	Comparison Criteria			
BORING	3011-28-B01	MACs			TACO
SAMPLE	3011-28-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.69				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.011** **J**	12,000	--	--	--
Benzo[a]anthracene	**0.068**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.084**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.15**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.075**	--	--	--	--
Benzo[k]fluoranthene	**0.051**	9	--	--	--
Chrysene	**0.087**	88	--	--	--
Fluoranthene	**0.13**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.051**	0.9	1.6	0.9	--
Phenanthrene	**0.07**	--	--	--	--
Pyrene	**0.21**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.35** **J**	5	--	--	--
Arsenic	**3.8**	11.3	13	--	--
Barium	**48**	1,500	--	--	--
Beryllium	**0.29**	22	--	--	--
Boron	**8.3**	40	--	--	--
Cadmium	**0.17**	5.2	--	--	--
Calcium	**150,000**	--	--	--	--
Chromium	**22** †	21	--	--	--
Cobalt	**3.9**	20	--	--	--
Copper	**14**	2,900	--	--	--
Iron	**8,200**	15,000	15,900	--	--
Lead	**100**	107	--	--	--
Magnesium	**86,000**	325,000	--	--	--
Manganese	**250**	630	636	--	--
Mercury	**0.015** **J**	0.89	--	--	--
Nickel	**16**	100	--	--	--
Potassium	**620**	--	--	--	--
Selenium	**0.45** **J**	1.3	--	--	--
Silver	ND U	4.4	--	--	--
Sodium	**1,700**	--	--	--	--
Vanadium	**14**	550	--	--	--
Zinc	**47**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.5**	--	--	--	2
Boron	**0.71**	--	--	--	2
Chromium	**0.016** **J**	--	--	--	0.1
Manganese	**1.8** **L**	--	--	--	0.15
Nickel	**0.047**	--	--	--	0.1
Zinc	**0.25** **J**	--	--	--	5
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: 500-107642-4
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:
2/29/2016 5:08:50 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-4

Job ID: 500-107642-4

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-4

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-28-B01 (0-1) (500-107642-7), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-28-B02 (0-1) (500-107642-6), 3011-28-B01 (0-1) (500-107642-7) and (500-107642-E-1-H) 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: 500-107642-4

Client Sample ID: 3011-28-B01 (0-1)

Lab Sample ID: 500-107642-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.070		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.21		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.068		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.087		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.15		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-28-B01 (0-1) (Continued)

Lab Sample ID: 500-107642-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[k]fluoranthene	0.051		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.084		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.051		0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.075		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.35	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.8		0.54	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	48		0.54	0.099	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	8.3		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.17		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	22	B	0.54	0.093	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.9		0.27	0.061	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.54	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8200	B	11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	100		0.27	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	86000	B	54	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	250		0.54	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	16	B	0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	620		27	4.4	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.45	J	0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		54	7.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.27	0.079	mg/Kg	1	☼	6010B	Total/NA
Zinc	47	B	5.4	1.7	mg/Kg	5	☼	6010B	Total/NA
Barium	0.50		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.71		0.50	0.050	mg/L	1		6010B	TCLP
Chromium	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	1.8		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.047		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.019	0.0098	mg/Kg	1	☼	7471B	Total/NA
pH	8.69		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-7	3011-28-B01 (0-1)	Solid	02/16/16 10:30	02/17/16 07:45

Client Sample ID: 3011-28-B01 (0-1)
Date Collected: 02/16/16 10:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-7
Matrix: Solid
Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0031	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Benzene	<0.0040		0.0040	0.00090	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Bromodichloromethane	<0.0040		0.0040	0.00068	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Bromoform	<0.0040		0.0040	0.00082	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Bromomethane	<0.0040	*	0.0040	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
2-Butanone (MEK)	<0.0040		0.0040	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Carbon disulfide	<0.0040		0.0040	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Carbon tetrachloride	<0.0040		0.0040	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Chlorobenzene	<0.0040		0.0040	0.00095	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Chloroethane	<0.0040		0.0040	0.0017	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Chloroform	<0.0040		0.0040	0.00079	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Chloromethane	<0.0040		0.0040	0.00097	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
cis-1,2-Dichloroethene	<0.0040		0.0040	0.00082	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
cis-1,3-Dichloropropene	<0.0040		0.0040	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Dibromochloromethane	<0.0040		0.0040	0.00046	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,1-Dichloroethane	<0.0040		0.0040	0.00083	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,2-Dichloroethane	<0.0040		0.0040	0.00060	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,1-Dichloroethene	<0.0040		0.0040	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,2-Dichloropropane	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,3-Dichloropropene, Total	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Ethylbenzene	<0.0040		0.0040	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
2-Hexanone	<0.0040		0.0040	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Methylene Chloride	<0.0040		0.0040	0.0031	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.00083	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Methyl tert-butyl ether	<0.0040		0.0040	0.00095	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Styrene	<0.0040		0.0040	0.00095	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,1,2,2-Tetrachloroethane	<0.0040		0.0040	0.00064	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Tetrachloroethene	<0.0040		0.0040	0.00084	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Toluene	<0.0040		0.0040	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
trans-1,2-Dichloroethene	<0.0040		0.0040	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
trans-1,3-Dichloropropene	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,1,1-Trichloroethane	<0.0040		0.0040	0.00094	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
1,1,2-Trichloroethane	<0.0040		0.0040	0.00078	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Trichloroethene	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Vinyl acetate	<0.0040		0.0040	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Vinyl chloride	<0.0040		0.0040	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1
Xylenes, Total	<0.0081		0.0081	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 10:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 122*	*02/17/16 08:40*	*02/24/16 10:59*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/17/16 08:40*	*02/24/16 10:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 134*	*02/17/16 08:40*	*02/24/16 10:59*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/24/16 10:59*	*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	☼	02/22/16 07:04	02/26/16 23:32	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1

Client Sample ID: 3011-28-B01 (0-1)
Date Collected: 02/16/16 10:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-7
Matrix: Solid
Percent Solids: 87.6

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	0.045	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2-Methylnaphthalene	<0.037		0.037	0.0069	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Acenaphthylene	<0.037		0.037	0.0050	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Phenanthrene	**0.070**		0.037	0.0052	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Anthracene	**0.011**	**J**	0.037	0.0063	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Fluoranthene	**0.13**		0.037	0.0070	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Pyrene	**0.21**		0.037	0.0075	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Benzo[a]anthracene	**0.068**		0.037	0.0051	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1

Client Sample ID: 3011-28-B01 (0-1)
Date Collected: 02/16/16 10:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-7
Matrix: Solid
Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.087**		0.037	0.010	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Benzo[b]fluoranthene	**0.15**		0.037	0.0081	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Benzo[k]fluoranthene	**0.051**		0.037	0.011	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Benzo[a]pyrene	**0.084**		0.037	0.0073	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Indeno[1,2,3-cd]pyrene	**0.051**		0.037	0.0097	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0073	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
Benzo[g,h,i]perylene	**0.075**		0.037	0.012	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 07:04	02/26/16 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*83*		*25 - 110*	*02/22/16 07:04*	*02/26/16 23:32*	*1*
Phenol-d5	*85*		*31 - 110*	*02/22/16 07:04*	*02/26/16 23:32*	*1*
Nitrobenzene-d5	*78*		*25 - 115*	*02/22/16 07:04*	*02/26/16 23:32*	*1*
2-Fluorobiphenyl	*69*		*25 - 119*	*02/22/16 07:04*	*02/26/16 23:32*	*1*
2,4,6-Tribromophenol	*70*		*35 - 137*	*02/22/16 07:04*	*02/26/16 23:32*	*1*
Terphenyl-d14	*152*	*X*	*36 - 134*	*02/22/16 07:04*	*02/26/16 23:32*	*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	☼	02/24/16 08:46	02/26/16 02:14	1
Arsenic	**3.8**		0.54	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Barium	**48**		0.54	0.099	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Beryllium	**0.29**		0.22	0.047	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Boron	**8.3**		2.7	0.38	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Cadmium	**0.17**		0.11	0.031	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Calcium	**150000**	**B**	110	35	mg/Kg	☼	02/24/16 08:46	02/26/16 04:25	10
Chromium	**22**	**B**	0.54	0.093	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Cobalt	**3.9**		0.27	0.061	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Copper	**14**		0.54	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Iron	**8200**	**B**	11	4.2	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Lead	**100**		0.27	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Magnesium	**86000**	**B**	54	22	mg/Kg	☼	02/24/16 08:46	02/26/16 04:25	10
Manganese	**250**		0.54	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Nickel	**16**	**B**	0.54	0.15	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Potassium	**620**		27	4.4	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Selenium	**0.45**	**J**	0.54	0.27	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Silver	<0.27		0.27	0.064	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Sodium	**1700**		54	7.2	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Vanadium	**14**		0.27	0.079	mg/Kg	☼	02/24/16 08:46	02/26/16 02:14	1
Zinc	**47**	**B**	5.4	1.7	mg/Kg	☼	02/24/16 08:46	02/26/16 16:15	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.50**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:26	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 20:26	1
Boron	**0.71**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:26	1

Client Sample ID: 3011-28-B01 (0-1)
Date Collected: 02/16/16 10:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-7
Matrix: Solid
Percent Solids: 87.6

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		02/23/16 09:14	02/24/16 20:26	1
Chromium	**0.016**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:26	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:26	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 20:26	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 20:26	1
Manganese	**1.8**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:26	1
Nickel	**0.047**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:26	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 20:26	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:26	1
Zinc	**0.25**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 20:26	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		02/23/16 09:24	02/25/16 08:23	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		02/23/16 09:14	02/23/16 16:30	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 16:30	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		02/22/16 15:15	02/23/16 12:07	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.015**	**J**	0.019	0.0098	mg/Kg	☼	02/23/16 15:15	02/24/16 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.69**		0.200	0.200	SU			02/20/16 12:31	1

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.

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: 500-107642-4

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 #: 500-107642
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: TEE
Client Project #: 1009241.0008.01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 500116634
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total RCRA Metals	TCLP/SPLP RCRA Metals	pH/% Solids					Comments
6		3011-28-B02 (0-1)	2-16-16	1020	2	S	X	X	X	X	X					
7		3011-28-B01 (0-1)	2-16-16	1030	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
P. Neal	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-4

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
47W 400 block of IL 38 ISGS #3011-29 (Agricultural Land)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89654079 (Decimal Degrees) Longitude: -88.53336098 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89654079 Longitude: -88.53336098

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 3011-29-B01 was sampled within the construction zone adjacent to ISGS #3011-29 (Agricultural Land). Refer to PSI Report for ISGS #3011-29 (Agricultural Land) including Table 4-4, and Figures 4-5A&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 J107642-5.

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

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

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

Company Name: Ecology and Environment, Inc.

Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-29 (Agricultural Land)		Comparison Criteria			
BORING	3011-29-B01		MACs			TACO
SAMPLE	3011-29-B01 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.2					
VOCs (None Detected)						
SVOCs (mg/kg)						
Acenaphthylene	**0.005**	**J**	--	--	--	--
Anthracene	**0.011**	**J**	12,000	--	--	--
Benzo[a]anthracene	**0.094**		0.9	1.8	1.1	--
Benzo[a]pyrene	**0.14**	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.19**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.18**		--	--	--	--
Benzo[k]fluoranthene	**0.094**		9	--	--	--
Chrysene	**0.14**		88	--	--	--
Dibenzo(a,h)anthracene	**0.036**		0.09	0.42	0.2	--
Fluoranthene	**0.1**		3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.15**		0.9	1.6	0.9	--
Phenanthrene	**0.056**		--	--	--	--
Pyrene	**0.33**		2,300	--	--	--
Inorganics (mg/kg)						
Antimony	**0.37**	**J**	5	--	--	--
Arsenic	**2**		11.3	13	--	--
Barium	**30**		1,500	--	--	--
Beryllium	**0.18**		22	--	--	--
Boron	**9.4**		40	--	--	--
Cadmium	**0.15**		5.2	--	--	--
Calcium	**170,000**		--	--	--	--
Chromium	**10**		21	--	--	--
Cobalt	**2.5**		20	--	--	--
Copper	**7.4**		2,900	--	--	--
Iron	**5,000**		15,000	15,900	--	--
Lead	**64**		107	--	--	--
Magnesium	**97,000**		325,000	--	--	--
Manganese	**260**		630	636	--	--
Nickel	**6.8**		100	--	--	--
Potassium	**400**		--	--	--	--
Selenium	**0.35**	**J**	1.3	--	--	--
Sodium	**1,300**		--	--	--	--
Vanadium	**13**		550	--	--	--
Zinc	**43**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.38**	**J**	--	--	--	2
Boron	**0.86**		--	--	--	2
Manganese	**0.59**	**L**	--	--	--	0.15
Zinc	**0.37**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.081**		--	--	--	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: 500-107642-5
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:
2/29/2016 5:09:16 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-5

Job ID: 500-107642-5

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-5

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-29-B01 (0-1) (500-107642-8), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-29-B01 (0-1) (500-107642-8) and (500-107642-E-1-H) 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: 500-107642-5

Client Sample ID: 3011-29-B01 (0-1)

Lab Sample ID: 500-107642-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0050	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.056		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.10		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.33		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.094		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.14		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.19		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.094		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.14		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.15		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.036		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.18		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.37	J	0.91	0.19	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.0		0.46	0.21	mg/Kg	1	☼	6010B	Total/NA
Barium	30		0.46	0.084	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.18		0.18	0.040	mg/Kg	1	☼	6010B	Total/NA
Boron	9.4		2.3	0.32	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15		0.091	0.026	mg/Kg	1	☼	6010B	Total/NA
Calcium	170000	B	91	29	mg/Kg	10	☼	6010B	Total/NA
Chromium	10	B	0.46	0.079	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.5		0.23	0.052	mg/Kg	1	☼	6010B	Total/NA
Copper	7.4		0.46	0.099	mg/Kg	1	☼	6010B	Total/NA
Iron	5000	B	9.1	3.5	mg/Kg	1	☼	6010B	Total/NA
Lead	64		0.23	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	97000	B	46	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	260		0.46	0.090	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.8	B	0.46	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	400		23	3.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.46	0.23	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		46	6.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.23	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	43	B	4.6	1.4	mg/Kg	5	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.86		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.59		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.37	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.081		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.20		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-8	3011-29-B01 (0-1)	Solid	02/16/16 14:20	02/17/16 07:45

Client Sample ID: 3011-29-B01 (0-1)
Date Collected: 02/16/16 14:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-8
Matrix: Solid
Percent Solids: 88.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.015		0.015	0.0030	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Benzene	<0.0038		0.0038	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Bromodichloromethane	<0.0038		0.0038	0.00064	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Bromoform	<0.0038		0.0038	0.00078	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Bromomethane	<0.0038	*	0.0038	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
2-Butanone (MEK)	<0.0038		0.0038	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Carbon disulfide	<0.0038		0.0038	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Carbon tetrachloride	<0.0038		0.0038	0.00082	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Chlorobenzene	<0.0038		0.0038	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Chloroethane	<0.0038		0.0038	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Chloroform	<0.0038		0.0038	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Chloromethane	<0.0038		0.0038	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
cis-1,2-Dichloroethene	<0.0038		0.0038	0.00078	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
cis-1,3-Dichloropropene	<0.0038		0.0038	0.00087	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Dibromochloromethane	<0.0038		0.0038	0.00044	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,1-Dichloroethane	<0.0038		0.0038	0.00079	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,2-Dichloroethane	<0.0038		0.0038	0.00057	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,1-Dichloroethene	<0.0038		0.0038	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,2-Dichloropropane	<0.0038	*	0.0038	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,3-Dichloropropene, Total	<0.0038		0.0038	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Ethylbenzene	<0.0038		0.0038	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
2-Hexanone	<0.0038		0.0038	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Methylene Chloride	<0.0038		0.0038	0.0029	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
4-Methyl-2-pentanone (MIBK)	<0.0038		0.0038	0.00079	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Methyl tert-butyl ether	<0.0038		0.0038	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Styrene	<0.0038		0.0038	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,1,2,2-Tetrachloroethane	<0.0038		0.0038	0.00061	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Tetrachloroethene	<0.0038		0.0038	0.00079	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Toluene	<0.0038		0.0038	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
trans-1,2-Dichloroethene	<0.0038		0.0038	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
trans-1,3-Dichloropropene	<0.0038		0.0038	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,1,1-Trichloroethane	<0.0038		0.0038	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
1,1,2-Trichloroethane	<0.0038		0.0038	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Trichloroethene	<0.0038		0.0038	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Vinyl acetate	<0.0038		0.0038	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Vinyl chloride	<0.0038		0.0038	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1
Xylenes, Total	<0.0076		0.0076	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 122*	*02/17/16 08:40*	*02/23/16 13:36*	*1*
Dibromofluoromethane	*86*		*75 - 120*	*02/17/16 08:40*	*02/23/16 13:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*74*		*70 - 134*	*02/17/16 08:40*	*02/23/16 13:36*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/23/16 13:36*	*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	☼	02/22/16 07:04	02/27/16 21:18	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1

Client Sample ID: 3011-29-B01 (0-1)
Date Collected: 02/16/16 14:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-8
Matrix: Solid
Percent Solids: 88.8

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	☼	02/22/16 07:04	02/27/16 21:18	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Acenaphthylene	**0.0050**	**J**	0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4-Nitrophenol	<0.73		0.73	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Phenanthrene	**0.056**		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Anthracene	**0.011**	**J**	0.036	0.0061	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Fluoranthene	**0.10**		0.036	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Pyrene	**0.33**		0.036	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Benzo[a]anthracene	**0.094**		0.036	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1

Client Sample ID: 3011-29-B01 (0-1)
Date Collected: 02/16/16 14:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-8
Matrix: Solid
Percent Solids: 88.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.14**		0.036	0.0099	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Benzo[b]fluoranthene	**0.19**		0.036	0.0079	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Benzo[k]fluoranthene	**0.094**		0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Benzo[a]pyrene	**0.14**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Indeno[1,2,3-cd]pyrene	**0.15**		0.036	0.0094	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Dibenz(a,h)anthracene	**0.036**		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
Benzo[g,h,i]perylene	**0.18**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*76*		*25 - 110*	*02/22/16 07:04*	*02/27/16 21:18*	*1*
Phenol-d5	*75*		*31 - 110*	*02/22/16 07:04*	*02/27/16 21:18*	*1*
Nitrobenzene-d5	*73*		*25 - 115*	*02/22/16 07:04*	*02/27/16 21:18*	*1*
2-Fluorobiphenyl	*79*		*25 - 119*	*02/22/16 07:04*	*02/27/16 21:18*	*1*
2,4,6-Tribromophenol	*64*		*35 - 137*	*02/22/16 07:04*	*02/27/16 21:18*	*1*
Terphenyl-d14	*176*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 21:18*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.37**	**J**	0.91	0.19	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Arsenic	**2.0**		0.46	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Barium	**30**		0.46	0.084	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Beryllium	**0.18**		0.18	0.040	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Boron	**9.4**		2.3	0.32	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Cadmium	**0.15**		0.091	0.026	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Calcium	**170000**	**B**	91	29	mg/Kg	☼	02/24/16 08:46	02/26/16 04:29	10
Chromium	**10**	**B**	0.46	0.079	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Cobalt	**2.5**		0.23	0.052	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Copper	**7.4**		0.46	0.099	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Iron	**5000**	**B**	9.1	3.5	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Lead	**64**		0.23	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Magnesium	**97000**	**B**	46	19	mg/Kg	☼	02/24/16 08:46	02/26/16 04:29	10
Manganese	**260**		0.46	0.090	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Nickel	**6.8**	**B**	0.46	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Potassium	**400**		23	3.7	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Selenium	**0.35**	**J**	0.46	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Silver	<0.23		0.23	0.053	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Sodium	**1300**		46	6.0	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Thallium	<0.46		0.46	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Vanadium	**13**		0.23	0.067	mg/Kg	☼	02/24/16 08:46	02/26/16 02:19	1
Zinc	**43**	**B**	4.6	1.4	mg/Kg	☼	02/24/16 08:46	02/26/16 16:22	5

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		02/23/16 09:14	02/24/16 20:33	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 20:33	1
Boron	**0.86**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:33	1

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

TestAmerica Job ID: 500-107642-5

Client Sample ID: 3011-29-B01 (0-1)
Date Collected: 02/16/16 14:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-8
Matrix: Solid
Percent Solids: 88.8

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		02/23/16 09:14	02/24/16 20:33	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:33	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:33	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 20:33	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 20:33	1
Manganese	**0.59**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:33	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:33	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 20:33	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:33	1
Zinc	**0.37**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 20:33	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		02/23/16 09:24	02/25/16 08:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 16:35	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 16:35	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		02/22/16 15:15	02/23/16 12:09	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0090	mg/Kg	☼	02/23/16 15:15	02/24/16 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.20**		0.200	0.200	SU			02/20/16 12:35	1

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.

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: 500-107642-5

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)	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 #: 500-107642
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 100934(-0008.01
Project Name: IL 39
Project Location/State: Kane County, IL
Lab Project #: 500115E64
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL Metals	TCLP/SPLP TAL Metals	pH/% Solid					Comments
8		Soil-29-B01 (0-1)	2/16/16	1420	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Shevon Scott	TA-Chi	2/17/16	0745

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:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107642-5

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 700 block of IL 38 ISGS #3011-31 (Agricultural Land)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.898091 (Decimal Degrees) Longitude: -88.525572 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.898091 Longitude: -88.525572

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 3011-31-B01, B04 ,B05 , and 3011-33-B01 were sampled within the construction zone adjacent to ISGS #3011-31 (Agricultural Land). Refer to PSI Report for ISGS #3011-31 (Agricultural Land) including Table 4-4, and Figures 4-5A&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 J107642-6 and J107642-8.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-31 (Agricultural Land)			Comparison Criteria			
BORING	3011-31-B01	3011-31-B04	3011-31-B05	MACs			TACO
SAMPLE	3011-31-B01 (0-1)	3011-31-B04 (0-1)	3011-31-B05 (0-1)				
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.56	8.62	8.37				
VOCs (None Detected)							
SVOCs (mg/kg)							
Acenaphthene	ND U	ND U	ND U	570	--	--	--
Acenaphthylene	ND U	**0.0073 J**	ND U	--	--	--	--
Anthracene	**0.015 J**	**0.017 J**	**0.017 J**	12,000	--	--	--
Benzo[a]anthracene	**0.063**	**0.057**	**0.08**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.096** †	**0.059**	**0.12** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	**0.089**	**0.21**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.08**	**0.044**	**0.17**	--	--	--	--
Benzo[k]fluoranthene	**0.047**	**0.04**	**0.071**	9	--	--	--
Chrysene	**0.081**	**0.071**	**0.12**	88	--	--	--
Fluoranthene	**0.086**	**0.1**	**0.1**	3,100	--	--	--
Fluorene	ND U	ND U	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.068**	**0.041**	**0.11**	0.9	1.6	0.9	--
Naphthalene	ND U	ND U	ND U	1.8	--	--	--
Phenanthrene	**0.081**	**0.087**	**0.078**	--	--	--	--
Pyrene	**0.24**	**0.17**	**0.26**	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	**0.39 J**	**0.25 J**	**0.31 J**	5	--	--	--
Arsenic	**5.9**	**3.7**	**3.5**	11.3	13	--	--
Barium	**55**	**47**	**41**	1,500	--	--	--
Beryllium	**0.18 J**	**0.29**	**0.29**	22	--	--	--
Boron	**11**	**7.6**	**7.2**	40	--	--	--
Cadmium	**0.26**	**0.21**	**0.15**	5.2	--	--	--
Calcium	**160,000**	**100,000**	**160,000**	--	--	--	--
Chromium	**15**	**12**	**11**	21	--	--	--
Cobalt	**2.8**	**5.4**	**4.3**	20	--	--	--
Copper	**8.6**	**12**	**9.7**	2,900	--	--	--
Iron	**6,400**	**8,700**	**7,900**	15,000	15,900	--	--
Lead	**110** †	**50**	**25**	107	--	--	--
Magnesium	**88,000**	**44,000**	**88,000**	325,000	--	--	--
Manganese	**320**	**300**	**350**	630	636	--	--
Mercury	**0.028**	**0.028**	**0.019**	0.89	--	--	--
Nickel	**7.4**	**13**	**11**	100	--	--	--
Potassium	**460**	**550**	**570**	--	--	--	--
Selenium	**0.45 J**	**0.41 J**	**0.49 J**	1.3	--	--	--
Sodium	**1,400**	**1,700**	**1,900**	--	--	--	--
Vanadium	**10**	**15**	**15**	550	--	--	--
Zinc	**41**	**47**	**38**	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	**0.31 J**	**0.55**	**0.28 J**	--	--	--	2
Boron	**0.54**	**0.74**	**0.35 J**	--	--	--	2
Cobalt	ND U	ND U	ND U	--	--	--	1
Lead	ND U	ND U	ND U	--	--	--	0.0075
Manganese	**0.74 L**	**2.2 L**	**0.93 L**	--	--	--	0.15
Nickel	**0.013 J**	**0.014 J**	ND U	--	--	--	0.1
Zinc	**0.6**	**0.15 J**	ND U	--	--	--	5
SPLP Metals (mg/L)							
Lead	NA	NA	NA	--	--	--	0.0075
Manganese	**0.017 J**	**0.33 L**	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 #3011-33 (Residence)	Comparison Criteria			
BORING	3011-33-B01	MACs			TACO
SAMPLE	3011-33-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (mg/kg)					
2-Butanone (MEK)	**0.013**	--	--	--	--
Acetone	**0.11**	25	--	--	--
SVOCs (mg/kg)					
Anthracene	**0.011 J**	12,000	--	--	--
Benzo[a]anthracene	**0.061**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.081**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.12**	--	--	--	--
Benzo[k]fluoranthene	**0.051**	9	--	--	--
Chrysene	**0.092**	88	--	--	--
Fluoranthene	**0.087**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.088**	0.9	1.6	0.9	--
Phenanthrene	**0.062**	--	--	--	--
Pyrene	**0.2**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.31 J**	5	--	--	--
Arsenic	**4.7**	11.3	13	--	--
Barium	**48**	1,500	--	--	--
Beryllium	**0.29**	22	--	--	--
Boron	**5.7**	40	--	--	--
Cadmium	**0.23**	5.2	--	--	--
Calcium	**110,000**	--	--	--	--
Chromium	**9.8**	21	--	--	--
Cobalt	**5.8**	20	--	--	--
Copper	**10**	2,900	--	--	--
Iron	**9,000**	15,000	15,900	--	--
Lead	**53**	107	--	--	--
Magnesium	**60,000**	325,000	--	--	--
Manganese	**390**	630	636	--	--
Mercury	**0.12**	0.89	--	--	--
Nickel	**12**	100	--	--	--
Potassium	**540**	--	--	--	--
Selenium	**0.48**	1.3	--	--	--
Sodium	**1,700**	--	--	--	--
Thallium	**0.32 J**	2.6	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**54**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45 J**	--	--	--	2
Boron	**0.44 J**	--	--	--	2
Manganese	**0.98 L**	--	--	--	0.15
Zinc	**0.81 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.83 L**	--	--	--	0.15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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Tel: (708)534-5200

TestAmerica Job ID: 500-107642-6
Client Project/Site: IDOT - IL 38 - WO 008

For:
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Attn: Mr. Dean Tiebout

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Job ID: 500-107642-6

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-6

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-31-B01 (0-1) (500-107642-9), 3011-31-B02 (0-1) (500-107642-10), 3011-31-B03 (0-1) (500-107642-11), 3011-31-B04 (0-1) (500-107642-12), 3011-31-B05 (0-1) (500-107642-13), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-31-B01 (0-1) (500-107642-9), 3011-31-B02 (0-1) (500-107642-10), 3011-31-B03 (0-1) (500-107642-11), 3011-31-B04 (0-1) (500-107642-12), 3011-31-B05 (0-1) (500-107642-13) and (500-107642-E-1-H) 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: 500-107642-6

Client Sample ID: 3011-31-B01 (0-1)

Lab Sample ID: 500-107642-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.081		0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.086		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.24		0.035	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.063		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.081		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.035	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.047		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.096		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.068		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.080		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.39	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.9		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	55		0.53	0.096	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.18	J	0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	11		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.26		0.11	0.030	mg/Kg	1	☼	6010B	Total/NA
Calcium	160000	B	110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	15	B	0.53	0.090	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.8		0.26	0.059	mg/Kg	1	☼	6010B	Total/NA
Copper	8.6		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	6400	B	11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	110		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	88000	B	53	21	mg/Kg	10	☼	6010B	Total/NA
Manganese	320		0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.4	B	0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	460		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.45	J	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Sodium	1400		53	6.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA
Zinc	41	B	5.3	1.7	mg/Kg	5	☼	6010B	Total/NA
Barium	0.31	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.54		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.74		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.60	B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.017	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.028		0.017	0.0088	mg/Kg	1	☼	7471B	Total/NA
pH	8.56		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-31-B04 (0-1)

Lab Sample ID: 500-107642-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0073	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.087		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.017	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.10		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.17		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.057		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.071		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.089		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.040		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.059		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.041		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.044		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.25	J	0.99	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.7		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	47		0.50	0.091	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-31-B04 (0-1) (Continued) — Lab Sample ID: 500-107642-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.29		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	7.6		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.21		0.099	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	100000	B	99	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	12	B	0.50	0.085	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.4		0.25	0.056	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	8700	B	9.9	3.8	mg/Kg	1	☼	6010B	Total/NA
Lead	50		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	44000	B	5.0	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	300		0.50	0.098	mg/Kg	1	☼	6010B	Total/NA
Nickel	13	B	0.50	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	550		25	4.1	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.41	J	0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		50	6.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.25	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	47	B	5.0	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.74		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.014	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.15	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.33		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.028		0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.62		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-31-B05 (0-1) — Lab Sample ID: 500-107642-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.078		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.017	J	0.038	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.10		0.038	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.26		0.038	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.080		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.12		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.21		0.038	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.071		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.12		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.17		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.31	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.5		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	41		0.53	0.097	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	7.2		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	160000	B	110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.53	0.091	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.3		0.26	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	9.7		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107642-6

Client Sample ID: 3011-31-B05 (0-1) (Continued)

Lab Sample ID: 500-107642-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	7900	B	11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	25		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	88000	B	53	21	mg/Kg	10	☼	6010B	Total/NA
Manganese	350		0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	11	B	0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	570		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.49	J	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Sodium	1900		53	7.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA
Zinc	38	B	5.3	1.7	mg/Kg	5	☼	6010B	Total/NA
Barium	0.28	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.93		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.074	J B	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.019		0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.37		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-6

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-9	3011-31-B01 (0-1)	Solid	02/16/16 09:40	02/17/16 07:45
500-107642-12	3011-31-B04 (0-1)	Solid	02/16/16 09:55	02/17/16 07:45
500-107642-13	3011-31-B05 (0-1)	Solid	02/16/16 10:00	02/17/16 07:45

Client Sample ID: 3011-31-B01 (0-1)
Date Collected: 02/16/16 09:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-9
Matrix: Solid
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0030	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Benzene	<0.0039		0.0039	0.00087	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Bromodichloromethane	<0.0039		0.0039	0.00066	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Bromoform	<0.0039		0.0039	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Bromomethane	<0.0039	*	0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
2-Butanone (MEK)	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Carbon disulfide	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Carbon tetrachloride	<0.0039		0.0039	0.00084	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Chlorobenzene	<0.0039		0.0039	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Chloroethane	<0.0039		0.0039	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Chloroform	<0.0039		0.0039	0.00076	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Chloromethane	<0.0039		0.0039	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
cis-1,2-Dichloroethene	<0.0039		0.0039	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
cis-1,3-Dichloropropene	<0.0039		0.0039	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Dibromochloromethane	<0.0039		0.0039	0.00045	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,1-Dichloroethane	<0.0039		0.0039	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,2-Dichloroethane	<0.0039		0.0039	0.00058	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,1-Dichloroethene	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,2-Dichloropropane	<0.0039	*	0.0039	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,3-Dichloropropene, Total	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Ethylbenzene	<0.0039		0.0039	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
2-Hexanone	<0.0039		0.0039	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Methylene Chloride	<0.0039		0.0039	0.0030	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
4-Methyl-2-pentanone (MIBK)	<0.0039		0.0039	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Methyl tert-butyl ether	<0.0039		0.0039	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Styrene	<0.0039		0.0039	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,1,2,2-Tetrachloroethane	<0.0039		0.0039	0.00062	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Tetrachloroethene	<0.0039		0.0039	0.00081	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Toluene	<0.0039		0.0039	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
trans-1,2-Dichloroethene	<0.0039		0.0039	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
trans-1,3-Dichloropropene	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,1,1-Trichloroethane	<0.0039		0.0039	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
1,1,2-Trichloroethane	<0.0039		0.0039	0.00076	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Trichloroethene	<0.0039		0.0039	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Vinyl acetate	<0.0039		0.0039	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Vinyl chloride	<0.0039		0.0039	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1
Xylenes, Total	<0.0078		0.0078	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 122*	*02/17/16 08:40*	*02/23/16 14:02*	*1*
Dibromofluoromethane	*88*		*75 - 120*	*02/17/16 08:40*	*02/23/16 14:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 134*	*02/17/16 08:40*	*02/23/16 14:02*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/23/16 14:02*	*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	☼	02/22/16 07:04	02/27/16 21:48	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1

Client Sample ID: 3011-31-B01 (0-1)
Date Collected: 02/16/16 09:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-9
Matrix: Solid
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Naphthalene	<0.035		0.035	0.0055	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Hexachlorocyclopentadiene	<0.72		0.72	0.20	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Acenaphthene	<0.035		0.035	0.0064	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Hexachlorobenzene	<0.072		0.072	0.0082	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Phenanthrene	**0.081**		0.035	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Anthracene	**0.015**	**J**	0.035	0.0059	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Fluoranthene	**0.086**		0.035	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Pyrene	**0.24**		0.035	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Benzo[a]anthracene	**0.063**		0.035	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1

Client Sample ID: 3011-31-B01 (0-1)
Date Collected: 02/16/16 09:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-9
Matrix: Solid
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.081**		0.035	0.0097	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Benzo[b]fluoranthene	**0.13**		0.035	0.0077	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Benzo[k]fluoranthene	**0.047**		0.035	0.010	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Benzo[a]pyrene	**0.096**		0.035	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Indeno[1,2,3-cd]pyrene	**0.068**		0.035	0.0092	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
Benzo[g,h,i]perylene	**0.080**		0.035	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*80*		*25 - 110*	*02/22/16 07:04*	*02/27/16 21:48*	*1*
Phenol-d5	*79*		*31 - 110*	*02/22/16 07:04*	*02/27/16 21:48*	*1*
Nitrobenzene-d5	*85*		*25 - 115*	*02/22/16 07:04*	*02/27/16 21:48*	*1*
2-Fluorobiphenyl	*90*		*25 - 119*	*02/22/16 07:04*	*02/27/16 21:48*	*1*
2,4,6-Tribromophenol	*68*		*35 - 137*	*02/22/16 07:04*	*02/27/16 21:48*	*1*
Terphenyl-d14	*178*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 21:48*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.39**	**J**	1.1	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Arsenic	**5.9**		0.53	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Barium	**55**		0.53	0.096	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Beryllium	**0.18**	**J**	0.21	0.046	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Boron	**11**		2.6	0.37	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Cadmium	**0.26**		0.11	0.030	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Calcium	**160000**	**B**	110	34	mg/Kg	☼	02/24/16 08:46	02/26/16 04:34	10
Chromium	**15**	**B**	0.53	0.090	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Cobalt	**2.8**		0.26	0.059	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Copper	**8.6**		0.53	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Iron	**6400**	**B**	11	4.1	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Lead	**110**		0.26	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Magnesium	**88000**	**B**	53	21	mg/Kg	☼	02/24/16 08:46	02/26/16 04:34	10
Manganese	**320**		0.53	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Nickel	**7.4**	**B**	0.53	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Potassium	**460**		26	4.3	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Selenium	**0.45**	**J**	0.53	0.26	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Sodium	**1400**		53	6.9	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Vanadium	**10**		0.26	0.077	mg/Kg	☼	02/24/16 08:46	02/26/16 02:24	1
Zinc	**41**	**B**	5.3	1.7	mg/Kg	☼	02/24/16 08:46	02/26/16 16:29	5

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		02/23/16 09:14	02/24/16 20:40	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 20:40	1
Boron	**0.54**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 20:40	1

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

TestAmerica Job ID: 500-107642-6

Client Sample ID: 3011-31-B01 (0-1)
Date Collected: 02/16/16 09:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-9
Matrix: Solid
Percent Solids: 90.9

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		02/23/16 09:14	02/24/16 20:40	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:40	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:40	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 20:40	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 20:40	1
Manganese	**0.74**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:40	1
Nickel	**0.013**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:40	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 20:40	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 20:40	1
Zinc	**0.60**	**B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 20:40	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		02/23/16 09:24	02/25/16 08:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 16:47	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 16:47	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		02/22/16 15:15	02/23/16 12:11	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.028**		0.017	0.0088	mg/Kg	☼	02/23/16 15:15	02/24/16 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.56**		0.200	0.200	SU			02/20/16 12:39	1

Client Sample ID: 3011-31-B04 (0-1)
Date Collected: 02/16/16 09:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-12
Matrix: Solid
Percent Solids: 86.8

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	☼	02/17/16 08:40	02/23/16 15:18	1
Benzene	<0.0044		0.0044	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Bromodichloromethane	<0.0044		0.0044	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Bromoform	<0.0044		0.0044	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Bromomethane	<0.0044	*	0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Carbon tetrachloride	<0.0044		0.0044	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Chloroethane	<0.0044		0.0044	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Chloroform	<0.0044		0.0044	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Chloromethane	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Dibromochloromethane	<0.0044		0.0044	0.00050	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,1-Dichloroethane	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,2-Dichloroethane	<0.0044		0.0044	0.00065	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,2-Dichloropropane	<0.0044	*	0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,3-Dichloropropene, Total	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Methylene Chloride	<0.0044		0.0044	0.0033	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00090	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00069	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Tetrachloroethene	<0.0044		0.0044	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00085	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Vinyl acetate	<0.0044		0.0044	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Vinyl chloride	<0.0044		0.0044	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1
Xylenes, Total	<0.0088		0.0088	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 122*	*02/17/16 08:40*	*02/23/16 15:18*	*1*
Dibromofluoromethane	*91*		*75 - 120*	*02/17/16 08:40*	*02/23/16 15:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 134*	*02/17/16 08:40*	*02/23/16 15:18*	*1*
Toluene-d8 (Surr)	*105*		*75 - 122*	*02/17/16 08:40*	*02/23/16 15:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.080	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1

Client Sample ID: 3011-31-B04 (0-1)
Date Collected: 02/16/16 09:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-12
Matrix: Solid
Percent Solids: 86.8

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	☼	02/22/16 07:04	02/27/16 00:58	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Acenaphthylene	**0.0073**	**J**	0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Phenanthrene	**0.087**		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Anthracene	**0.017**	**J**	0.036	0.0060	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Fluoranthene	**0.10**		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Pyrene	**0.17**		0.036	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Benzo[a]anthracene	**0.057**		0.036	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1

Client Sample ID: 3011-31-B04 (0-1)
Date Collected: 02/16/16 09:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-12
Matrix: Solid
Percent Solids: 86.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.071**		0.036	0.0099	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Benzo[b]fluoranthene	**0.089**		0.036	0.0078	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Benzo[k]fluoranthene	**0.040**		0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Benzo[a]pyrene	**0.059**		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Indeno[1,2,3-cd]pyrene	**0.041**		0.036	0.0094	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
Benzo[g,h,i]perylene	**0.044**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*83*		*25 - 110*	*02/22/16 07:04*	*02/27/16 00:58*	*1*
Phenol-d5	*83*		*31 - 110*	*02/22/16 07:04*	*02/27/16 00:58*	*1*
Nitrobenzene-d5	*80*		*25 - 115*	*02/22/16 07:04*	*02/27/16 00:58*	*1*
2-Fluorobiphenyl	*72*		*25 - 119*	*02/22/16 07:04*	*02/27/16 00:58*	*1*
2,4,6-Tribromophenol	*70*		*35 - 137*	*02/22/16 07:04*	*02/27/16 00:58*	*1*
Terphenyl-d14	*160*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 00:58*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.25**	**J**	0.99	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Arsenic	**3.7**		0.50	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Barium	**47**		0.50	0.091	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Beryllium	**0.29**		0.20	0.043	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Boron	**7.6**		2.5	0.35	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Cadmium	**0.21**		0.099	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Calcium	**100000**	**B**	99	32	mg/Kg	☼	02/24/16 08:46	02/26/16 04:54	10
Chromium	**12**	**B**	0.50	0.085	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Cobalt	**5.4**		0.25	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Copper	**12**		0.50	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Iron	**8700**	**B**	9.9	3.8	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Lead	**50**		0.25	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Magnesium	**44000**	**B**	5.0	2.0	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Manganese	**300**		0.50	0.098	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Nickel	**13**	**B**	0.50	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Potassium	**550**		25	4.1	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Selenium	**0.41**	**J**	0.50	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Silver	<0.25		0.25	0.058	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Sodium	**1700**		50	6.6	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Thallium	<0.50		0.50	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Vanadium	**15**		0.25	0.073	mg/Kg	☼	02/24/16 08:46	02/26/16 02:39	1
Zinc	**47**	**B**	5.0	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 16:49	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.55**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:00	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:00	1
Boron	**0.74**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:00	1

Client Sample ID: 3011-31-B04 (0-1)
Date Collected: 02/16/16 09:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-12
Matrix: Solid
Percent Solids: 86.8

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		02/23/16 09:14	02/24/16 21:00	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:00	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:00	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:00	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:00	1
Manganese	**2.2**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:00	1
Nickel	**0.014**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:00	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:00	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:00	1
Zinc	**0.15**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.33**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 09:13	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		02/23/16 09:14	02/23/16 16:59	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 16:59	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		02/22/16 15:15	02/23/16 12:17	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.028**		0.017	0.0087	mg/Kg	☼	02/23/16 15:15	02/24/16 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.62**		0.200	0.200	SU			02/20/16 12:49	1

Client Sample ID: 3011-31-B05 (0-1)
Date Collected: 02/16/16 10:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-13
Matrix: Solid
Percent Solids: 81.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Bromoform	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Bromomethane	<0.0045	*	0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Carbon disulfide	<0.0045		0.0045	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Chloroform	<0.0045		0.0045	0.00088	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,1-Dichloroethane	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,2-Dichloroethane	<0.0045		0.0045	0.00067	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,2-Dichloropropane	<0.0045	*	0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Styrene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 122*	*02/17/16 08:40*	*02/23/16 15:43*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/17/16 08:40*	*02/23/16 15:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 134*	*02/17/16 08:40*	*02/23/16 15:43*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/23/16 15:43*	*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	☼	02/22/16 07:04	02/27/16 01:27	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
1,3-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
1,4-Dichlorobenzene	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1

Client Sample ID: 3011-31-B05 (0-1)
Date Collected: 02/16/16 10:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-13
Matrix: Solid
Percent Solids: 81.2

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	☼	02/22/16 07:04	02/27/16 01:27	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Nitrobenzene	<0.038		0.038	0.0097	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Naphthalene	<0.038		0.038	0.0060	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2-Methylnaphthalene	<0.038		0.038	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Dimethyl phthalate	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
2,4-Dinitrotoluene	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Acenaphthene	<0.038		0.038	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Diethyl phthalate	<0.19		0.19	0.066	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
N-Nitrosodiphenylamine	<0.19		0.19	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Phenanthrene	**0.078**		0.038	0.0054	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Anthracene	**0.017**	**J**	0.038	0.0065	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Carbazole	<0.19		0.19	0.097	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Fluoranthene	**0.10**		0.038	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Pyrene	**0.26**		0.038	0.0077	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Butyl benzyl phthalate	<0.19		0.19	0.074	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Benzo[a]anthracene	**0.080**		0.038	0.0052	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1

Client Sample ID: 3011-31-B05 (0-1)
Date Collected: 02/16/16 10:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-13
Matrix: Solid
Percent Solids: 81.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.12**		0.038	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Benzo[b]fluoranthene	**0.21**		0.038	0.0084	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Benzo[k]fluoranthene	**0.071**		0.038	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Benzo[a]pyrene	**0.12**		0.038	0.0075	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Indeno[1,2,3-cd]pyrene	**0.11**		0.038	0.010	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0075	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
Benzo[g,h,i]perylene	**0.17**		0.038	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1
3 & 4 Methylphenol	<0.19		0.19	0.065	mg/Kg	☼	02/22/16 07:04	02/27/16 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*83*		*25 - 110*	*02/22/16 07:04*	*02/27/16 01:27*	*1*
Phenol-d5	*83*		*31 - 110*	*02/22/16 07:04*	*02/27/16 01:27*	*1*
Nitrobenzene-d5	*83*		*25 - 115*	*02/22/16 07:04*	*02/27/16 01:27*	*1*
2-Fluorobiphenyl	*76*		*25 - 119*	*02/22/16 07:04*	*02/27/16 01:27*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/22/16 07:04*	*02/27/16 01:27*	*1*
Terphenyl-d14	*167*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 01:27*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.31**	**J**	1.1	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Arsenic	**3.5**		0.53	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Barium	**41**		0.53	0.097	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Beryllium	**0.29**		0.21	0.046	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Boron	**7.2**		2.6	0.37	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Cadmium	**0.15**		0.11	0.031	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Calcium	**160000**	**B**	110	34	mg/Kg	☼	02/24/16 08:46	02/26/16 04:58	10
Chromium	**11**	**B**	0.53	0.091	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Cobalt	**4.3**		0.26	0.060	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Copper	**9.7**		0.53	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Iron	**7900**	**B**	11	4.1	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Lead	**25**		0.26	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Magnesium	**88000**	**B**	53	21	mg/Kg	☼	02/24/16 08:46	02/26/16 04:58	10
Manganese	**350**		0.53	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Nickel	**11**	**B**	0.53	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Potassium	**570**		26	4.3	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Selenium	**0.49**	**J**	0.53	0.26	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Sodium	**1900**		53	7.0	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Vanadium	**15**		0.26	0.077	mg/Kg	☼	02/24/16 08:46	02/26/16 02:44	1
Zinc	**38**	**B**	5.3	1.7	mg/Kg	☼	02/24/16 08:46	02/26/16 16:56	5

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		02/23/16 09:14	02/24/16 21:07	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:07	1
Boron	**0.35**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:07	1

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

TestAmerica Job ID: 500-107642-6

Client Sample ID: 3011-31-B05 (0-1)
Date Collected: 02/16/16 10:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-13
Matrix: Solid
Percent Solids: 81.2

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		02/23/16 09:14	02/24/16 21:07	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:07	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:07	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:07	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:07	1
Manganese	**0.93**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:07	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:07	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:07	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:07	1
Zinc	**0.074**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:07	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		02/23/16 09:24	02/25/16 09:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 17:03	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:03	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:19	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.019**		0.018	0.0095	mg/Kg	☼	02/23/16 15:15	02/24/16 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.37**		0.200	0.200	SU			02/20/16 12:53	1

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.

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: 500-107642-6

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 #: 500-107642
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0008-01
Project Name: IC78
Project Location/State: Kane County, IL
Lab Project #: 500 11864
Sampler: S. Cooper
Lab PM: D. Wright

Preservative / Parameter: VOC | SVOC | Total TAL metals | TCLP/SPLP TAL metals | % Solid

Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	% Solid	Comments
9		3011-31-B01 (0-1)	2-16-16	0940	2	S	X	X	X	X	X	
10		3011-31-B02 (0-1)	2-16-16	0945	2	S	X	X	X	X	X	
11		3011-31-B03 (0-1)	2-16-16	0950	2	S	X	X	X	X	X	
12		3011-31-B04 (0-1)	2-16-16	0955	2	S	X	X	X	X	X	
13		3011-31-B05 (0-1)	2-16-16	1000	2	S	X	X	X	X	X	

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	P. Neal	TA	2/16/16	1530
P. Neal	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

Lab Courier: [signature]
Shipped:
Hand Delivered:

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107642-6

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107642-8
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:
2/29/2016 5:10:40 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

Table of Contents

Job ID: 500-107642-8

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-8

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-33-B01 (0-1) (500-107642-18), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-33-B01 (0-1) (500-107642-18) and (500-107642-E-1-H) 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: 500-107642-8

Client Sample ID: 3011-33-B01 (0-1)

Lab Sample ID: 500-107642-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.11		0.022	0.0043	mg/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	0.013		0.0056	0.0020	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.062		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.087		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.061		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.051		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.081		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.088		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.31	J	0.96	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.7		0.48	0.22	mg/Kg	1	☼	6010B	Total/NA
Barium	48		0.48	0.088	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.19	0.042	mg/Kg	1	☼	6010B	Total/NA
Boron	5.7		2.4	0.34	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23		0.096	0.028	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	96	31	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.8	B	0.48	0.083	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.8		0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Copper	10		0.48	0.10	mg/Kg	1	☼	6010B	Total/NA
Iron	9000	B	9.6	3.7	mg/Kg	1	☼	6010B	Total/NA
Lead	53		0.24	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	60000	B	48	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	390		0.48	0.096	mg/Kg	1	☼	6010B	Total/NA
Nickel	12	B	0.48	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	540		24	3.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.48		0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		48	6.4	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.32	J	0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.24	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	54	B	4.8	1.5	mg/Kg	5	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.98		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.81	B F1	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.83		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.12		0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.29		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-18	3011-33-B01 (0-1)	Solid	02/16/16 09:30	02/17/16 07:45

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.11**		0.022	0.0043	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Benzene	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromodichloromethane	<0.0056		0.0056	0.00094	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromoform	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromomethane	<0.0056	*	0.0056	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
2-Butanone (MEK)	**0.013**		0.0056	0.0020	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Carbon disulfide	<0.0056		0.0056	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Carbon tetrachloride	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chlorobenzene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloroethane	<0.0056		0.0056	0.0023	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloroform	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloromethane	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
cis-1,2-Dichloroethene	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
cis-1,3-Dichloropropene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Dibromochloromethane	<0.0056		0.0056	0.00064	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1-Dichloroethane	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,2-Dichloroethane	<0.0056		0.0056	0.00083	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1-Dichloroethene	<0.0056		0.0056	0.0020	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,2-Dichloropropane	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,3-Dichloropropene, Total	<0.0056		0.0056	0.0016	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Ethylbenzene	<0.0056		0.0056	0.0014	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
2-Hexanone	<0.0056		0.0056	0.0017	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Methylene Chloride	<0.0056		0.0056	0.0042	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Methyl tert-butyl ether	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Styrene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,2,2-Tetrachloroethane	<0.0056		0.0056	0.00089	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Tetrachloroethene	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Toluene	<0.0056		0.0056	0.0019	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
trans-1,2-Dichloroethene	<0.0056		0.0056	0.0014	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
trans-1,3-Dichloropropene	<0.0056		0.0056	0.0016	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,1-Trichloroethane	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,2-Trichloroethane	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Trichloroethene	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Vinyl acetate	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Vinyl chloride	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Xylenes, Total	<0.011		0.011	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 122*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
Dibromofluoromethane	*99*		*75 - 120*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 134*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/16/16 09:30*	*02/24/16 18:01*	*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	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Phenanthrene	**0.062**		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Anthracene	**0.011**	**J**	0.036	0.0061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Fluoranthene	**0.087**		0.036	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Pyrene	**0.20**		0.036	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[a]anthracene	**0.061**		0.036	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.092**		0.036	0.0099	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[b]fluoranthene	**0.13**		0.036	0.0079	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[k]fluoranthene	**0.051**		0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[a]pyrene	**0.081**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Indeno[1,2,3-cd]pyrene	**0.088**		0.036	0.0095	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[g,h,i]perylene	**0.12**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*77*		*25 - 110*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Phenol-d5	*81*		*31 - 110*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Nitrobenzene-d5	*74*		*25 - 115*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
2-Fluorobiphenyl	*72*		*25 - 119*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Terphenyl-d14	*168*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 03:50*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.31**	**J**	0.96	0.20	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Arsenic	**4.7**		0.48	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Barium	**48**		0.48	0.088	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Beryllium	**0.29**		0.19	0.042	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Boron	**5.7**		2.4	0.34	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Cadmium	**0.23**		0.096	0.028	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Calcium	**110000**	**B**	96	31	mg/Kg	☼	02/24/16 08:46	02/26/16 05:18	10
Chromium	**9.8**	**B**	0.48	0.083	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Cobalt	**5.8**		0.24	0.055	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Copper	**10**		0.48	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Iron	**9000**	**B**	9.6	3.7	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Lead	**53**		0.24	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Magnesium	**60000**	**B**	48	20	mg/Kg	☼	02/24/16 08:46	02/26/16 05:18	10
Manganese	**390**		0.48	0.096	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Nickel	**12**	**B**	0.48	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Potassium	**540**		24	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Selenium	**0.48**		0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Silver	<0.24		0.24	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Sodium	**1700**		48	6.4	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Thallium	**0.32**	**J**	0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Vanadium	**13**		0.24	0.070	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Zinc	**54**	**B**	4.8	1.5	mg/Kg	☼	02/24/16 08:46	02/26/16 17:45	5

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		02/23/16 09:14	02/24/16 21:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:56	1
Boron	**0.44**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:56	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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		02/23/16 09:14	02/24/16 21:56	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:56	1
Manganese	**0.98**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:56	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Zinc	**0.81**	**B F1**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.83**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 09:54	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		02/23/16 09:14	02/23/16 17:24	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:24	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		02/22/16 15:15	02/23/16 12:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.12**		0.018	0.0095	mg/Kg	☼	02/23/16 15:15	02/24/16 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.29**		0.200	0.200	SU			02/20/16 13:10	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-8

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.
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.
¤	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: 500-107642-8

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)	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 #: 500-107642

Chain of Custody Number:

Page ___ of ___

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341-0008-01
Project Name: IL 38
Project Location/State: Kane County IL
Lab Project #: 58011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total RCRA metals	TCLP/SPLP RCRA metals	pH/% Solids					Comments
18		3011-33-B01 (0-1)	2-16-16	0930	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2/16/16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-8

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 600 to 700 blocks of IL 38 ISGS #3011-32 (Agricultural Land)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.898032 (Decimal Degrees) Longitude: -88.524071 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.898032 Longitude: -88.524071

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 3011-32-B01, B02, & 3011-34-B01 were sampled within the construction zone adjacent to ISGS #3011-32 (Agricultural Land). Refer to PSI Report for ISGS #3011-32 (Agricultural Land) including Table 4-4, and Figures 4-5A&B and 4-6A&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 J107642-7, and J107642-9.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-32 (Agricultural Land)			Comparison Criteria			
BORING	3011-32-B01	3011-32-B02		MACs			TACO
SAMPLE	3011-32-B01 (0-1)	3011-32-B02 (0-1)	3011-32-B02 (0-1)D				
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.37	8.34	8.28				
VOCs (mg/kg)							
Acetone	ND U	**0.029**	**0.026**	25	--	--	--
SVOCs (mg/kg)							
Acenaphthene	**0.014 J**	ND U	ND U	570	--	--	--
Anthracene	**0.043**	**0.016 J**	**0.013 J**	12,000	--	--	--
Benzo[a]anthracene	**0.15**	**0.078**	**0.059**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.19** †	**0.09**	**0.073**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.29**	**0.12**	**0.11**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.23**	**0.08**	**0.076**	--	--	--	--
Benzo[k]fluoranthene	**0.098**	**0.05**	**0.045**	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	**0.12 J**	ND U	46	--	--	--
Chrysene	**0.18**	**0.094**	**0.082**	88	--	--	--
Dibenzo(a,h)anthracene	**0.059**	ND U	ND U	0.09	0.42	0.2	--
Fluoranthene	**0.23**	**0.098**	**0.091**	3,100	--	--	--
Fluorene	**0.014 J**	ND U	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.19**	**0.072**	**0.064**	0.9	1.6	0.9	--
Naphthalene	**0.0061 J**	**0.0061 J**	ND U	1.8	--	--	--
Phenanthrene	**0.22**	**0.079**	**0.083**	--	--	--	--
Pyrene	**0.53**	**0.23**	**0.2**	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	**0.27 J**	**0.3 J**	**0.22 J**	5	--	--	--
Arsenic	**3.9**	**3.9**	**4.7**	11.3	13	--	--
Barium	**49**	**43**	**48**	1,500	--	--	--
Beryllium	**0.3**	**0.35**	**0.36**	22	--	--	--
Boron	**6.6**	**5.4**	**5.3**	40	--	--	--
Cadmium	**0.16**	**0.2**	**0.18**	5.2	--	--	--
Calcium	**120,000**	**120,000**	**98,000**	--	--	--	--
Chromium	**12**	**15**	**13**	21	--	--	--
Cobalt	**4.3**	**4.8**	**5.6**	20	--	--	--
Copper	**12**	**9.8**	**10**	2,900	--	--	--
Iron	**8,400**	**9,100**	**9,500**	15,000	15,900	--	--
Lead	**54**	**53**	**49**	107	--	--	--
Magnesium	**48,000**	**56,000**	**46,000**	325,000	--	--	--
Manganese	**310**	**340**	**380**	630	636	--	--
Mercury	ND U	**0.057**	**0.033**	0.89	--	--	--
Nickel	**11**	**11**	**13**	100	--	--	--
Potassium	**600**	**580**	**650**	--	--	--	--
Selenium	**0.46 J**	**0.48 J**	**0.46 J**	1.3	--	--	--
Sodium	**2,500**	**1,100**	**1,200**	--	--	--	--
Thallium	ND U	ND U	ND U	2.6	--	--	--
Vanadium	**14**	**13**	**15**	550	--	--	--
Zinc	**46**	**48**	**47**	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	**0.51**	**0.61**	**0.59**	--	--	--	2
Boron	**0.58**	**0.63**	**0.57**	--	--	--	2
Cobalt	ND U	**0.019 J**	**0.018 J**	--	--	--	1
Manganese	**1.1 L**	**8 L**	**7.6 L**	--	--	--	0.15
Nickel	**0.011 J**	**0.019 J**	**0.018 J**	--	--	--	0.1
Zinc	**0.12 J**	**1**	**0.4 J**	--	--	--	5
SPLP Metals (mg/L)							
Manganese	**0.21 L**	**0.91 L**	**0.64 L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-34 (Residence & Burgin Farms)	Comparison Criteria			
BORING	3011-34-B01	MACs			TACO
SAMPLE	3011-34-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.28				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.014** J	12,000	--	--	--
Benzo[a]anthracene	**0.066**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.094** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.11**	--	--	--	--
Benzo[k]fluoranthene	**0.033** J	9	--	--	--
Chrysene	**0.093**	88	--	--	--
Fluoranthene	**0.088**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.099**	0.9	1.6	0.9	--
Phenanthrene	**0.066**	--	--	--	--
Pyrene	**0.22**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.21** J	5	--	--	--
Arsenic	**4.1**	11.3	13	--	--
Barium	**46**	1,500	--	--	--
Beryllium	**0.27**	22	--	--	--
Boron	**6.2**	40	--	--	--
Cadmium	**0.13**	5.2	--	--	--
Calcium	**120,000**	--	--	--	--
Chromium	**9.5**	21	--	--	--
Cobalt	**5.2**	20	--	--	--
Copper	**9**	2,900	--	--	--
Iron	**8,800**	15,000	15,900	--	--
Lead	**15**	107	--	--	--
Magnesium	**71,000**	325,000	--	--	--
Manganese	**480**	630	636	--	--
Mercury	**0.035**	0.89	--	--	--
Nickel	**11**	100	--	--	--
Potassium	**550**	--	--	--	--
Selenium	**0.35** J	1.3	--	--	--
Silver	**0.09** J	4.4	--	--	--
Sodium	**940**	--	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**33**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.55**	--	--	--	2
Boron	**0.74**	--	--	--	2
Cobalt	**0.013** J	--	--	--	1
Manganese	**4.7** L	--	--	--	0.15
Nickel	**0.017** J	--	--	--	0.1
Zinc	**0.33** J	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.39** 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: 500-107642-7
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:
2/29/2016 5:10:19 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

Table of Contents

Job ID: 500-107642-7

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-7

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-32-B03 (0-1) (500-107642-14), 3011-32-B01 (0-1) (500-107642-15), 3011-32-B02 (0-1) (500-107642-16), 3011-32-B02 (0-1)D (500-107642-17), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-32-B03 (0-1) (500-107642-14), 3011-32-B01 (0-1) (500-107642-15), 3011-32-B02 (0-1) (500-107642-16), 3011-32-B02 (0-1)D (500-107642-17) and (500-107642-E-1-H) 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.

Client Sample ID: 3011-32-B01 (0-1)

Lab Sample ID: 500-107642-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0061	J	0.035	0.0055	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.014	J	0.035	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.014	J	0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.22		0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.043		0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.23		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.53		0.035	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.18		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-32-B01 (0-1) (Continued)

Lab Sample ID: 500-107642-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.29		0.035	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.098		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.19		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.19		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.059		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.23		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.27	J	0.97	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.9		0.48	0.22	mg/Kg	1	☼	6010B	Total/NA
Barium	49		0.48	0.088	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.19	0.042	mg/Kg	1	☼	6010B	Total/NA
Boron	6.6		2.4	0.34	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16		0.097	0.028	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	97	31	mg/Kg	10	☼	6010B	Total/NA
Chromium	12	B	0.48	0.083	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.3		0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.48	0.10	mg/Kg	1	☼	6010B	Total/NA
Iron	8400	B	9.7	3.7	mg/Kg	1	☼	6010B	Total/NA
Lead	54		0.24	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	48000	B	4.8	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	310		0.48	0.096	mg/Kg	1	☼	6010B	Total/NA
Nickel	11	B	0.48	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	600		24	3.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.46	J	0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Sodium	2500		48	6.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.24	0.071	mg/Kg	1	☼	6010B	Total/NA
Zinc	46	B	4.8	1.5	mg/Kg	5	☼	6010B	Total/NA
Barium	0.51		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.58		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.12	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.21		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.37		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-32-B02 (0-1)

Lab Sample ID: 500-107642-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.029		0.022	0.0043	mg/Kg	1	☼	8260B	Total/NA
Naphthalene	0.0061	J	0.037	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.079		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.016	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.098		0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.23		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.078		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.094		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.12	J	0.19	0.069	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.050		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.090		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.072		0.037	0.0098	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107642-7

Client Sample ID: 3011-32-B02 (0-1) (Continued) — Lab Sample ID: 500-107642-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	0.080		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.30	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.9		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	43		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.35		0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	5.4		2.8	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	15	B	0.57	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.8		0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	9.8		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	9100	B	11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	53		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	56000	B	5.7	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	340		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	11	B	0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	580		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.48	J	0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.28	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	48	B	5.7	1.8	mg/Kg	5	☼	6010B	Total/NA
Barium	0.61		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.63		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.019	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	8.0		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.019	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	1.0	B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.91		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.057		0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.34		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-32-B02 (0-1)D — Lab Sample ID: 500-107642-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.026		0.019	0.0038	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.083		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.091		0.037	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.059		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.082		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.045		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.073		0.037	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.064		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.076		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.22	J	1.0	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.7		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	48		0.50	0.092	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.36		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-32-B02 (0-1)D (Continued)

Lab Sample ID: 500-107642-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	5.3		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.10	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	98000	B	100	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	13	B	0.50	0.086	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.6		0.25	0.057	mg/Kg	1	☼	6010B	Total/NA
Copper	10		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	9500	B	10	3.9	mg/Kg	1	☼	6010B	Total/NA
Lead	49		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	46000	B	5.0	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	380		0.50	0.099	mg/Kg	1	☼	6010B	Total/NA
Nickel	13	B	0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	650		25	4.1	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.46	J	0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Sodium	1200		50	6.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.25	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	47	B	5.0	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.59		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.57		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.018	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	7.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.018	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.40	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.64		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.033		0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.28		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-7

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-15	3011-32-B01 (0-1)	Solid	02/16/16 14:35	02/17/16 07:45
500-107642-16	3011-32-B02 (0-1)	Solid	02/16/16 14:40	02/17/16 07:45
500-107642-17	3011-32-B02 (0-1)D	Solid	02/16/16 14:40	02/17/16 07:45

Client Sample ID: 3011-32-B01 (0-1)
Date Collected: 02/16/16 14:35
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-15
Matrix: Solid
Percent Solids: 88.3

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	☼	02/17/16 08:40	02/23/16 16:39	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Bromodichloromethane	<0.0046		0.0046	0.00077	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Bromoform	<0.0046		0.0046	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Bromomethane	<0.0046	*	0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Carbon tetrachloride	<0.0046		0.0046	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Chloroform	<0.0046		0.0046	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Chloromethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,1-Dichloroethane	<0.0046		0.0046	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,2-Dichloropropane	<0.0046	*	0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Tetrachloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 122*	*02/17/16 08:40*	*02/23/16 16:39*	*1*
Dibromofluoromethane	*94*		*75 - 120*	*02/17/16 08:40*	*02/23/16 16:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 134*	*02/17/16 08:40*	*02/23/16 16:39*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/23/16 16:39*	*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	☼	02/22/16 07:04	02/27/16 02:24	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1

Client Sample ID: 3011-32-B01 (0-1)
Date Collected: 02/16/16 14:35
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-15
Matrix: Solid
Percent Solids: 88.3

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	☼	02/22/16 07:04	02/27/16 02:24	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Naphthalene	**0.0061**	**J**	0.035	0.0055	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Hexachlorocyclopentadiene	<0.72		0.72	0.20	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Acenaphthene	**0.014**	**J**	0.035	0.0064	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Fluorene	**0.014**	**J**	0.035	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Hexachlorobenzene	<0.072		0.072	0.0082	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Phenanthrene	**0.22**		0.035	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Anthracene	**0.043**		0.035	0.0059	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Fluoranthene	**0.23**		0.035	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Pyrene	**0.53**		0.035	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Benzo[a]anthracene	**0.15**		0.035	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1

Client Sample ID: 3011-32-B01 (0-1)
Date Collected: 02/16/16 14:35
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-15
Matrix: Solid
Percent Solids: 88.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.18**		0.035	0.0097	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Benzo[b]fluoranthene	**0.29**		0.035	0.0077	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Benzo[k]fluoranthene	**0.098**		0.035	0.010	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Benzo[a]pyrene	**0.19**		0.035	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Indeno[1,2,3-cd]pyrene	**0.19**		0.035	0.0092	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Dibenz(a,h)anthracene	**0.059**		0.035	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
Benzo[g,h,i]perylene	**0.23**		0.035	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*93*		*25 - 110*	*02/22/16 07:04*	*02/27/16 02:24*	*1*
Phenol-d5	*91*		*31 - 110*	*02/22/16 07:04*	*02/27/16 02:24*	*1*
Nitrobenzene-d5	*86*		*25 - 115*	*02/22/16 07:04*	*02/27/16 02:24*	*1*
2-Fluorobiphenyl	*77*		*25 - 119*	*02/22/16 07:04*	*02/27/16 02:24*	*1*
2,4,6-Tribromophenol	*77*		*35 - 137*	*02/22/16 07:04*	*02/27/16 02:24*	*1*
Terphenyl-d14	*172*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 02:24*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.27**	**J**	0.97	0.20	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Arsenic	**3.9**		0.48	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Barium	**49**		0.48	0.088	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Beryllium	**0.30**		0.19	0.042	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Boron	**6.6**		2.4	0.34	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Cadmium	**0.16**		0.097	0.028	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Calcium	**120000**	**B**	97	31	mg/Kg	☼	02/24/16 08:46	02/26/16 05:06	10
Chromium	**12**	**B**	0.48	0.083	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Cobalt	**4.3**		0.24	0.055	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Copper	**12**		0.48	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Iron	**8400**	**B**	9.7	3.7	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Lead	**54**		0.24	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Magnesium	**48000**	**B**	4.8	2.0	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Manganese	**310**		0.48	0.096	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Nickel	**11**	**B**	0.48	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Potassium	**600**		24	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Selenium	**0.46**	**J**	0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Silver	<0.24		0.24	0.057	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Sodium	**2500**		48	6.4	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Thallium	<0.48		0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Vanadium	**14**		0.24	0.071	mg/Kg	☼	02/24/16 08:46	02/26/16 03:02	1
Zinc	**46**	**B**	4.8	1.5	mg/Kg	☼	02/24/16 08:46	02/26/16 17:25	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.51**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:36	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:36	1
Boron	**0.58**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:36	1

Client Sample ID: 3011-32-B01 (0-1)
Date Collected: 02/16/16 14:35
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-15
Matrix: Solid
Percent Solids: 88.3

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		02/23/16 09:14	02/24/16 21:36	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:36	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:36	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:36	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:36	1
Manganese	**1.1**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:36	1
Nickel	**0.011**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:36	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:36	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:36	1
Zinc	**0.12**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:36	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		02/23/16 09:24	02/25/16 09:33	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		02/23/16 09:14	02/23/16 17:11	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:11	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		02/22/16 15:15	02/23/16 12:27	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	☼	02/23/16 15:15	02/24/16 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.37**		0.200	0.200	SU			02/20/16 13:00	1

Client Sample ID: 3011-32-B02 (0-1)
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-16
Matrix: Solid
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.029**		0.022	0.0043	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Benzene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Bromodichloromethane	<0.0055		0.0055	0.00093	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Bromoform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Bromomethane	<0.0055	*	0.0055	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
2-Butanone (MEK)	<0.0055		0.0055	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Carbon disulfide	<0.0055		0.0055	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Carbon tetrachloride	<0.0055		0.0055	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Chlorobenzene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Chloroethane	<0.0055		0.0055	0.0023	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Chloroform	<0.0055		0.0055	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Chloromethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
cis-1,2-Dichloroethene	<0.0055		0.0055	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
cis-1,3-Dichloropropene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Dibromochloromethane	<0.0055		0.0055	0.00064	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,1-Dichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,2-Dichloroethane	<0.0055		0.0055	0.00082	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,1-Dichloroethene	<0.0055		0.0055	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,2-Dichloropropane	<0.0055	*	0.0055	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,3-Dichloropropene, Total	<0.0055		0.0055	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Ethylbenzene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
2-Hexanone	<0.0055		0.0055	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Methylene Chloride	<0.0055		0.0055	0.0042	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
4-Methyl-2-pentanone (MIBK)	<0.0055		0.0055	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Methyl tert-butyl ether	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Styrene	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,1,2,2-Tetrachloroethane	<0.0055		0.0055	0.00088	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Tetrachloroethene	<0.0055		0.0055	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Toluene	<0.0055		0.0055	0.0019	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
trans-1,2-Dichloroethene	<0.0055		0.0055	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
trans-1,3-Dichloropropene	<0.0055		0.0055	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,1,1-Trichloroethane	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
1,1,2-Trichloroethane	<0.0055		0.0055	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Trichloroethene	<0.0055		0.0055	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Vinyl acetate	<0.0055		0.0055	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Vinyl chloride	<0.0055		0.0055	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/17/16 08:40*	*02/23/16 17:04*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/17/16 08:40*	*02/23/16 17:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 134*	*02/17/16 08:40*	*02/23/16 17:04*	*1*
Toluene-d8 (Surr)	*105*		*75 - 122*	*02/17/16 08:40*	*02/23/16 17:04*	*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	☼	02/22/16 07:04	02/27/16 02:53	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1

Client Sample ID: 3011-32-B02 (0-1)
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-16
Matrix: Solid
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	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Naphthalene	**0.0061**	**J**	0.037	0.0058	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2-Methylnaphthalene	<0.037		0.037	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Acenaphthylene	<0.037		0.037	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Phenanthrene	**0.079**		0.037	0.0052	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Anthracene	**0.016**	**J**	0.037	0.0063	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Fluoranthene	**0.098**		0.037	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Pyrene	**0.23**		0.037	0.0075	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Benzo[a]anthracene	**0.078**		0.037	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1

Client Sample ID: 3011-32-B02 (0-1)
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-16
Matrix: Solid
Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.094**		0.037	0.010	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Bis(2-ethylhexyl) phthalate	**0.12**	**J**	0.19	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Benzo[b]fluoranthene	**0.12**		0.037	0.0081	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Benzo[k]fluoranthene	**0.050**		0.037	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Benzo[a]pyrene	**0.090**		0.037	0.0073	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Indeno[1,2,3-cd]pyrene	**0.072**		0.037	0.0098	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0073	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
Benzo[g,h,i]perylene	**0.080**		0.037	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 07:04	02/27/16 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*88*		*25 - 110*	*02/22/16 07:04*	*02/27/16 02:53*	*1*
Phenol-d5	*84*		*31 - 110*	*02/22/16 07:04*	*02/27/16 02:53*	*1*
Nitrobenzene-d5	*84*		*25 - 115*	*02/22/16 07:04*	*02/27/16 02:53*	*1*
2-Fluorobiphenyl	*76*		*25 - 119*	*02/22/16 07:04*	*02/27/16 02:53*	*1*
2,4,6-Tribromophenol	*77*		*35 - 137*	*02/22/16 07:04*	*02/27/16 02:53*	*1*
Terphenyl-d14	*164*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 02:53*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.30**	**J**	1.1	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Arsenic	**3.9**		0.57	0.26	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Barium	**43**		0.57	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Beryllium	**0.35**		0.23	0.049	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Boron	**5.4**		2.8	0.40	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Cadmium	**0.20**		0.11	0.033	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Calcium	**120000**	**B**	110	36	mg/Kg	☼	02/24/16 08:46	02/26/16 05:10	10
Chromium	**15**	**B**	0.57	0.097	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Cobalt	**4.8**		0.28	0.064	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Copper	**9.8**		0.57	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Iron	**9100**	**B**	11	4.4	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Lead	**53**		0.28	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Magnesium	**56000**	**B**	5.7	2.3	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Manganese	**340**		0.57	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Nickel	**11**	**B**	0.57	0.15	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Potassium	**580**		28	4.6	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Selenium	**0.48**	**J**	0.57	0.28	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Sodium	**1100**		57	7.5	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Vanadium	**13**		0.28	0.083	mg/Kg	☼	02/24/16 08:46	02/26/16 03:07	1
Zinc	**48**	**B**	5.7	1.8	mg/Kg	☼	02/24/16 08:46	02/26/16 17:32	5

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		02/23/16 09:14	02/24/16 21:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:43	1
Boron	**0.63**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:43	1

Client Sample ID: 3011-32-B02 (0-1)
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-16
Matrix: Solid
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		02/23/16 09:14	02/24/16 21:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:43	1
Cobalt	**0.019**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:43	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:43	1
Manganese	**8.0**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:43	1
Nickel	**0.019**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:43	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:43	1
Zinc	**1.0**	**B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.91**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 09:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 17:16	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:16	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		02/22/16 15:15	02/23/16 12:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.057**		0.018	0.0095	mg/Kg	☼	02/23/16 15:15	02/24/16 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.34**		0.200	0.200	SU			02/20/16 13:03	1

Client Sample ID: 3011-32-B02 (0-1)D
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-17
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.026**		0.019	0.0038	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Benzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Bromodichloromethane	<0.0049		0.0049	0.00082	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Bromoform	<0.0049		0.0049	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Bromomethane	<0.0049	*	0.0049	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
2-Butanone (MEK)	<0.0049		0.0049	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Carbon disulfide	<0.0049		0.0049	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Carbon tetrachloride	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Chlorobenzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Chloroethane	<0.0049		0.0049	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Chloroform	<0.0049		0.0049	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Chloromethane	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
cis-1,2-Dichloroethene	<0.0049		0.0049	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
cis-1,3-Dichloropropene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Dibromochloromethane	<0.0049		0.0049	0.00056	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,1-Dichloroethane	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,2-Dichloroethane	<0.0049		0.0049	0.00072	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,1-Dichloroethene	<0.0049		0.0049	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,2-Dichloropropane	<0.0049	*	0.0049	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,3-Dichloropropene, Total	<0.0049		0.0049	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Ethylbenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Methylene Chloride	<0.0049		0.0049	0.0037	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Methyl tert-butyl ether	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Styrene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,1,2,2-Tetrachloroethane	<0.0049		0.0049	0.00077	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Tetrachloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Toluene	<0.0049		0.0049	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
trans-1,2-Dichloroethene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
trans-1,3-Dichloropropene	<0.0049		0.0049	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,1,1-Trichloroethane	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
1,1,2-Trichloroethane	<0.0049		0.0049	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Trichloroethene	<0.0049		0.0049	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Vinyl acetate	<0.0049		0.0049	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Vinyl chloride	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1
Xylenes, Total	<0.0097		0.0097	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 122*	*02/17/16 08:40*	*02/23/16 17:30*	*1*
Dibromofluoromethane	*89*		*75 - 120*	*02/17/16 08:40*	*02/23/16 17:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 134*	*02/17/16 08:40*	*02/23/16 17:30*	*1*
Toluene-d8 (Surr)	*105*		*75 - 122*	*02/17/16 08:40*	*02/23/16 17:30*	*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	☼	02/22/16 07:04	02/27/16 03:22	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
1,3-Dichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
1,4-Dichlorobenzene	<0.19		0.19	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1

Client Sample ID: 3011-32-B02 (0-1)D
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-17
Matrix: Solid
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	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2-Methylphenol	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Isophorone	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,6-Dinitrotoluene	<0.19		0.19	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Acenaphthene	<0.037		0.037	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Diethyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
N-Nitrosodiphenylamine	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Phenanthrene	**0.083**		0.037	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Anthracene	**0.013**	**J**	0.037	0.0062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Carbazole	<0.19		0.19	0.092	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Fluoranthene	**0.091**		0.037	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Pyrene	**0.20**		0.037	0.0073	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Butyl benzyl phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Benzo[a]anthracene	**0.059**		0.037	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1

Client Sample ID: 3011-32-B02 (0-1)D
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-17
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.082**		0.037	0.010	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Di-n-octyl phthalate	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Benzo[b]fluoranthene	**0.11**		0.037	0.0080	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Benzo[k]fluoranthene	**0.045**		0.037	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Benzo[a]pyrene	**0.073**		0.037	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Indeno[1,2,3-cd]pyrene	**0.064**		0.037	0.0096	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
Benzo[g,h,i]perylene	**0.076**		0.037	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1
3 & 4 Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*90*		*25 - 110*	*02/22/16 07:04*	*02/27/16 03:22*	*1*
Phenol-d5	*89*		*31 - 110*	*02/22/16 07:04*	*02/27/16 03:22*	*1*
Nitrobenzene-d5	*86*		*25 - 115*	*02/22/16 07:04*	*02/27/16 03:22*	*1*
2-Fluorobiphenyl	*77*		*25 - 119*	*02/22/16 07:04*	*02/27/16 03:22*	*1*
2,4,6-Tribromophenol	*83*		*35 - 137*	*02/22/16 07:04*	*02/27/16 03:22*	*1*
Terphenyl-d14	*175*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 03:22*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.22**	**J**	1.0	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Arsenic	**4.7**		0.50	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Barium	**48**		0.50	0.092	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Beryllium	**0.36**		0.20	0.043	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Boron	**5.3**		2.5	0.35	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Cadmium	**0.18**		0.10	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Calcium	**98000**	**B**	100	32	mg/Kg	☼	02/24/16 08:46	02/26/16 05:14	10
Chromium	**13**	**B**	0.50	0.086	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Cobalt	**5.6**		0.25	0.057	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Copper	**10**		0.50	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Iron	**9500**	**B**	10	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Lead	**49**		0.25	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Magnesium	**46000**	**B**	5.0	2.0	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Manganese	**380**		0.50	0.099	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Nickel	**13**	**B**	0.50	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Potassium	**650**		25	4.1	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Selenium	**0.46**	**J**	0.50	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Silver	<0.25		0.25	0.059	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Sodium	**1200**		50	6.6	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Vanadium	**15**		0.25	0.073	mg/Kg	☼	02/24/16 08:46	02/26/16 03:12	1
Zinc	**47**	**B**	5.0	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 17:39	5

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		02/23/16 09:14	02/24/16 21:50	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:50	1
Boron	**0.57**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:50	1

Client Sample ID: 3011-32-B02 (0-1)D
Date Collected: 02/16/16 14:40
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-17
Matrix: Solid
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		02/23/16 09:14	02/24/16 21:50	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:50	1
Cobalt	**0.018**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:50	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:50	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:50	1
Manganese	**7.6**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:50	1
Nickel	**0.018**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:50	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:50	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:50	1
Zinc	**0.40**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.64**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 09:47	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		02/23/16 09:14	02/23/16 17:20	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 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		02/22/16 15:15	02/23/16 12:31	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.033**		0.017	0.0087	mg/Kg	☼	02/23/16 15:15	02/24/16 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.28**		0.200	0.200	SU			02/20/16 13:07	1

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.

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: 500-107642-7

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

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

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

Chain of Custody Record

Lab Job #: 500-107642

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009741.00008.01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 50011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total Tar metals	TCLP/SPLP TAL metals	pH / % Solids					Comments
14		3011-32-B03(0-1)	2/16/16	0910	2	S	X	X	X	X	X					
15		3011-32-B01(0-1)	2/16/16	1435	2	S	X	X	X	X	X					
16		3011-32-B02(0-1)	2/16/16	1440	2	S	X	X	X	X	X					
17		3011-32 B02(0-1)D	2/16/16	1440	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

SC 2/16/16

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
[signature]	EE	2/16/16	1530	P. Neal	TA	2/16/16	1530
P. Neal	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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:

TAL-0124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107642-7

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107642-9
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:
2/29/2016 5:13:04 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-9

Job ID: 500-107642-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-9

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-34-B01 (0-1) (500-107642-19), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-34-B01 (0-1) (500-107642-19) and (500-107642-E-1-H) 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: 500-107642-9

Client Sample ID: 3011-34-B01 (0-1)

Lab Sample ID: 500-107642-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.066		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.088		0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.22		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.066		0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.093		0.036	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.036	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.033	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.094		0.036	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.099		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
Antimony	0.21	J	0.99	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.1		0.49	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	46		0.49	0.091	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	6.2		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13		0.099	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	99	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.5	B	0.49	0.085	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.25	0.056	mg/Kg	1	☼	6010B	Total/NA
Copper	9.0		0.49	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	8800	B	9.9	3.8	mg/Kg	1	☼	6010B	Total/NA
Lead	15		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	71000	B	49	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	480		0.49	0.098	mg/Kg	1	☼	6010B	Total/NA
Nickel	11	B	0.49	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	550		25	4.0	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.49	0.24	mg/Kg	1	☼	6010B	Total/NA
Silver	0.090	J	0.25	0.058	mg/Kg	1	☼	6010B	Total/NA
Sodium	940		49	6.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.25	0.072	mg/Kg	1	☼	6010B	Total/NA
Zinc	33	B	4.9	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.74		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	4.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.33	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.39		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.035		0.017	0.0088	mg/Kg	1	☼	7471B	Total/NA
pH	8.28		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-19	3011-34-B01 (0-1)	Solid	02/16/16 14:50	02/17/16 07:45

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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	☼	02/17/16 08:40	02/24/16 12:54	1
Benzene	<0.0045		0.0045	0.00099	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromodichloromethane	<0.0045		0.0045	0.00075	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromoform	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromomethane	<0.0045	*	0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Carbon disulfide	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloroform	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Dibromochloromethane	<0.0045		0.0045	0.00051	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1-Dichloroethane	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,2-Dichloroethane	<0.0045		0.0045	0.00066	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Styrene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Xylenes, Total	<0.0089		0.0089	0.0017	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
Toluene-d8 (Surr)	*103*		*75 - 122*	*02/17/16 08:40*	*02/24/16 12:54*	*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	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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	☼	02/22/16 07:04	02/27/16 04:19	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Nitrobenzene	<0.036		0.036	0.0089	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Nitrophenol	<0.36		0.36	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Phenanthrene	**0.066**		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Anthracene	**0.014**	**J**	0.036	0.0060	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Fluoranthene	**0.088**		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Pyrene	**0.22**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[a]anthracene	**0.066**		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.093**		0.036	0.0097	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[b]fluoranthene	**0.13**		0.036	0.0077	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[k]fluoranthene	**0.033**	**J**	0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[a]pyrene	**0.094**		0.036	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Indeno[1,2,3-cd]pyrene	**0.099**		0.036	0.0093	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[g,h,i]perylene	**0.11**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*93*		*25 - 110*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Phenol-d5	*94*		*31 - 110*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Nitrobenzene-d5	*90*		*25 - 115*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
2-Fluorobiphenyl	*84*		*25 - 119*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Terphenyl-d14	*179*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 04:19*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.21**	**J**	0.99	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Arsenic	**4.1**		0.49	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Barium	**46**		0.49	0.091	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Beryllium	**0.27**		0.20	0.043	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Boron	**6.2**		2.5	0.35	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Cadmium	**0.13**		0.099	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Calcium	**120000**	**B**	99	32	mg/Kg	☼	02/24/16 08:46	02/26/16 05:23	10
Chromium	**9.5**	**B**	0.49	0.085	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Cobalt	**5.2**		0.25	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Copper	**9.0**		0.49	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Iron	**8800**	**B**	9.9	3.8	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Lead	**15**		0.25	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Magnesium	**71000**	**B**	49	20	mg/Kg	☼	02/24/16 08:46	02/26/16 05:23	10
Manganese	**480**		0.49	0.098	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Nickel	**11**	**B**	0.49	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Potassium	**550**		25	4.0	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Selenium	**0.35**	**J**	0.49	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Silver	**0.090**	**J**	0.25	0.058	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Sodium	**940**		49	6.5	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Thallium	<0.49		0.49	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Vanadium	**13**		0.25	0.072	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Zinc	**33**	**B**	4.9	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 17:52	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.55**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:23	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 22:23	1
Boron	**0.74**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:23	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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		02/23/16 09:14	02/24/16 22:23	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Cobalt	**0.013**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 22:23	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 22:23	1
Manganese	**4.7**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Nickel	**0.017**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 22:23	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Zinc	**0.33**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 22:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.39**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 10:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 17:52	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:52	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.035**		0.017	0.0088	mg/Kg	☼	02/23/16 15:15	02/24/16 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.28**		0.200	0.200	SU			02/20/16 13:18	1

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.

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: 500-107642-9

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

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

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

Chain of Custody Record

Lab Job #: 500-107642

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341-0008.01
Project Name: IL 3E
Project Location/State: Kane County, IL
Lab Project #: 500116E64
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
19		3011-34-B01(0-1)	2/16/16	1450	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
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
[signature]	EE	2/16/16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-9

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 750 IL 38 ISGS #3011-33 (Residence)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89839155 (Decimal Degrees) Longitude: -88.52266545 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89839155 Longitude: -88.52266545

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 3011-33-B01 was sampled within the construction zone adjacent to ISGS #3011-33 (Residence). Refer to PSI Report for ISGS #3011-33 (Residence) including Table 4-4, and Figures 4-5A&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 J107642-8.

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:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-33 (Residence)	Comparison Criteria			
BORING	3011-33-B01	MACs			TACO
SAMPLE	3011-33-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (mg/kg)					
2-Butanone (MEK)	**0.013**	--	--	--	--
Acetone	**0.11**	25	--	--	--
SVOCs (mg/kg)					
Anthracene	**0.011 J**	12,000	--	--	--
Benzo[a]anthracene	**0.061**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.081**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.12**	--	--	--	--
Benzo[k]fluoranthene	**0.051**	9	--	--	--
Chrysene	**0.092**	88	--	--	--
Fluoranthene	**0.087**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.088**	0.9	1.6	0.9	--
Phenanthrene	**0.062**	--	--	--	--
Pyrene	**0.2**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.31 J**	5	--	--	--
Arsenic	**4.7**	11.3	13	--	--
Barium	**48**	1,500	--	--	--
Beryllium	**0.29**	22	--	--	--
Boron	**5.7**	40	--	--	--
Cadmium	**0.23**	5.2	--	--	--
Calcium	**110,000**	--	--	--	--
Chromium	**9.8**	21	--	--	--
Cobalt	**5.8**	20	--	--	--
Copper	**10**	2,900	--	--	--
Iron	**9,000**	15,000	15,900	--	--
Lead	**53**	107	--	--	--
Magnesium	**60,000**	325,000	--	--	--
Manganese	**390**	630	636	--	--
Mercury	**0.12**	0.89	--	--	--
Nickel	**12**	100	--	--	--
Potassium	**540**	--	--	--	--
Selenium	**0.48**	1.3	--	--	--
Sodium	**1,700**	--	--	--	--
Thallium	**0.32 J**	2.6	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**54**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45 J**	--	--	--	2
Boron	**0.44 J**	--	--	--	2
Manganese	**0.98 L**	--	--	--	0.15
Zinc	**0.81 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.83 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: 500-107642-8
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:
2/29/2016 5:10:40 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

Table of Contents

Job ID: 500-107642-8

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-8

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-33-B01 (0-1) (500-107642-18), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-33-B01 (0-1) (500-107642-18) and (500-107642-E-1-H) 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: 500-107642-8

Client Sample ID: 3011-33-B01 (0-1)

Lab Sample ID: 500-107642-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.11		0.022	0.0043	mg/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	0.013		0.0056	0.0020	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.062		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.087		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.061		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.051		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.081		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.088		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.31	J	0.96	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.7		0.48	0.22	mg/Kg	1	☼	6010B	Total/NA
Barium	48		0.48	0.088	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.19	0.042	mg/Kg	1	☼	6010B	Total/NA
Boron	5.7		2.4	0.34	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23		0.096	0.028	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	96	31	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.8	B	0.48	0.083	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.8		0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Copper	10		0.48	0.10	mg/Kg	1	☼	6010B	Total/NA
Iron	9000	B	9.6	3.7	mg/Kg	1	☼	6010B	Total/NA
Lead	53		0.24	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	60000	B	48	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	390		0.48	0.096	mg/Kg	1	☼	6010B	Total/NA
Nickel	12	B	0.48	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	540		24	3.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.48		0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		48	6.4	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.32	J	0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.24	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	54	B	4.8	1.5	mg/Kg	5	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.98		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.81	B F1	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.83		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.12		0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.29		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-18	3011-33-B01 (0-1)	Solid	02/16/16 09:30	02/17/16 07:45

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.11**		0.022	0.0043	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Benzene	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromodichloromethane	<0.0056		0.0056	0.00094	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromoform	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromomethane	<0.0056	*	0.0056	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
2-Butanone (MEK)	**0.013**		0.0056	0.0020	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Carbon disulfide	<0.0056		0.0056	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Carbon tetrachloride	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chlorobenzene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloroethane	<0.0056		0.0056	0.0023	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloroform	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloromethane	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
cis-1,2-Dichloroethene	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
cis-1,3-Dichloropropene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Dibromochloromethane	<0.0056		0.0056	0.00064	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1-Dichloroethane	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,2-Dichloroethane	<0.0056		0.0056	0.00083	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1-Dichloroethene	<0.0056		0.0056	0.0020	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,2-Dichloropropane	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,3-Dichloropropene, Total	<0.0056		0.0056	0.0016	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Ethylbenzene	<0.0056		0.0056	0.0014	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
2-Hexanone	<0.0056		0.0056	0.0017	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Methylene Chloride	<0.0056		0.0056	0.0042	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Methyl tert-butyl ether	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Styrene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,2,2-Tetrachloroethane	<0.0056		0.0056	0.00089	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Tetrachloroethene	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Toluene	<0.0056		0.0056	0.0019	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
trans-1,2-Dichloroethene	<0.0056		0.0056	0.0014	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
trans-1,3-Dichloropropene	<0.0056		0.0056	0.0016	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,1-Trichloroethane	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,2-Trichloroethane	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Trichloroethene	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Vinyl acetate	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Vinyl chloride	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Xylenes, Total	<0.011		0.011	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 122*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
Dibromofluoromethane	*99*		*75 - 120*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 134*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/16/16 09:30*	*02/24/16 18:01*	*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	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Phenanthrene	**0.062**		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Anthracene	**0.011**	**J**	0.036	0.0061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Fluoranthene	**0.087**		0.036	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Pyrene	**0.20**		0.036	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[a]anthracene	**0.061**		0.036	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.092**		0.036	0.0099	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[b]fluoranthene	**0.13**		0.036	0.0079	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[k]fluoranthene	**0.051**		0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[a]pyrene	**0.081**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Indeno[1,2,3-cd]pyrene	**0.088**		0.036	0.0095	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[g,h,i]perylene	**0.12**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*77*		*25 - 110*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Phenol-d5	*81*		*31 - 110*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Nitrobenzene-d5	*74*		*25 - 115*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
2-Fluorobiphenyl	*72*		*25 - 119*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Terphenyl-d14	*168*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 03:50*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.31**	**J**	0.96	0.20	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Arsenic	**4.7**		0.48	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Barium	**48**		0.48	0.088	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Beryllium	**0.29**		0.19	0.042	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Boron	**5.7**		2.4	0.34	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Cadmium	**0.23**		0.096	0.028	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Calcium	**110000**	**B**	96	31	mg/Kg	☼	02/24/16 08:46	02/26/16 05:18	10
Chromium	**9.8**	**B**	0.48	0.083	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Cobalt	**5.8**		0.24	0.055	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Copper	**10**		0.48	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Iron	**9000**	**B**	9.6	3.7	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Lead	**53**		0.24	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Magnesium	**60000**	**B**	48	20	mg/Kg	☼	02/24/16 08:46	02/26/16 05:18	10
Manganese	**390**		0.48	0.096	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Nickel	**12**	**B**	0.48	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Potassium	**540**		24	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Selenium	**0.48**		0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Silver	<0.24		0.24	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Sodium	**1700**		48	6.4	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Thallium	**0.32**	**J**	0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Vanadium	**13**		0.24	0.070	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Zinc	**54**	**B**	4.8	1.5	mg/Kg	☼	02/24/16 08:46	02/26/16 17:45	5

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		02/23/16 09:14	02/24/16 21:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:56	1
Boron	**0.44**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:56	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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		02/23/16 09:14	02/24/16 21:56	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:56	1
Manganese	**0.98**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:56	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Zinc	**0.81**	**B F1**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.83**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 09:54	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		02/23/16 09:14	02/23/16 17:24	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:24	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		02/22/16 15:15	02/23/16 12:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.12**		0.018	0.0095	mg/Kg	☼	02/23/16 15:15	02/24/16 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.29**		0.200	0.200	SU			02/20/16 13:10	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-8

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.
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.
¤	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: 500-107642-8

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)	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 #: 500-107642
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 1009741-0008-01
Project Name: IL 38
Project Location/State: Kane County IL
Lab Project #: 58011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
18		3011-33-B01 (0-1)	2-16-16	0930	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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:

 TAL-4124-500 (0209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107642-8

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 725 IL 38 ISGS #3011-34 (Residence & Burgin Farms)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.8983551 (Decimal Degrees) Longitude: -88.52173467 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.8983551 Longitude: -88.52173467

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 3011-34-B01 was sampled within the construction zone adjacent to ISGS #3011-34 (Residence & Burgin Farms). Refer to PSI Report for ISGS #3011-34 (Residence & Burgin Farms) including Table 4-4, and Figures 4-5A&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 J107642-9.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-34 (Residence & Burgin Farms)	Comparison Criteria			
BORING	3011-34-B01	MACs			TACO
SAMPLE	3011-34-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.28				
VOCs (None Detected)					
SVOCs (mg/kg)					
Anthracene	**0.014** J	12,000	--	--	--
Benzo[a]anthracene	**0.066**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.094** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.11**	--	--	--	--
Benzo[k]fluoranthene	**0.033** J	9	--	--	--
Chrysene	**0.093**	88	--	--	--
Fluoranthene	**0.088**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.099**	0.9	1.6	0.9	--
Phenanthrene	**0.066**	--	--	--	--
Pyrene	**0.22**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.21** J	5	--	--	--
Arsenic	**4.1**	11.3	13	--	--
Barium	**46**	1,500	--	--	--
Beryllium	**0.27**	22	--	--	--
Boron	**6.2**	40	--	--	--
Cadmium	**0.13**	5.2	--	--	--
Calcium	**120,000**	--	--	--	--
Chromium	**9.5**	21	--	--	--
Cobalt	**5.2**	20	--	--	--
Copper	**9**	2,900	--	--	--
Iron	**8,800**	15,000	15,900	--	--
Lead	**15**	107	--	--	--
Magnesium	**71,000**	325,000	--	--	--
Manganese	**480**	630	636	--	--
Mercury	**0.035**	0.89	--	--	--
Nickel	**11**	100	--	--	--
Potassium	**550**	--	--	--	--
Selenium	**0.35** J	1.3	--	--	--
Silver	**0.09** J	4.4	--	--	--
Sodium	**940**	--	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**33**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.55**	--	--	--	2
Boron	**0.74**	--	--	--	2
Cobalt	**0.013** J	--	--	--	1
Manganese	**4.7** L	--	--	--	0.15
Nickel	**0.017** J	--	--	--	0.1
Zinc	**0.33** J	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.39** 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: 500-107642-9
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:
2/29/2016 5:13:04 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-9

Job ID: 500-107642-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-9

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-34-B01 (0-1) (500-107642-19), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-34-B01 (0-1) (500-107642-19) and (500-107642-E-1-H) 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: 500-107642-9

Client Sample ID: 3011-34-B01 (0-1)

Lab Sample ID: 500-107642-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.066		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.088		0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.22		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.066		0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.093		0.036	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.036	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.033	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.094		0.036	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.099		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
Antimony	0.21	J	0.99	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.1		0.49	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	46		0.49	0.091	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	6.2		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13		0.099	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	99	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.5	B	0.49	0.085	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.25	0.056	mg/Kg	1	☼	6010B	Total/NA
Copper	9.0		0.49	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	8800	B	9.9	3.8	mg/Kg	1	☼	6010B	Total/NA
Lead	15		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	71000	B	49	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	480		0.49	0.098	mg/Kg	1	☼	6010B	Total/NA
Nickel	11	B	0.49	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	550		25	4.0	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.49	0.24	mg/Kg	1	☼	6010B	Total/NA
Silver	0.090	J	0.25	0.058	mg/Kg	1	☼	6010B	Total/NA
Sodium	940		49	6.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.25	0.072	mg/Kg	1	☼	6010B	Total/NA
Zinc	33	B	4.9	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.74		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	4.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.33	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.39		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.035		0.017	0.0088	mg/Kg	1	☼	7471B	Total/NA
pH	8.28		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-19	3011-34-B01 (0-1)	Solid	02/16/16 14:50	02/17/16 07:45

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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	☼	02/17/16 08:40	02/24/16 12:54	1
Benzene	<0.0045		0.0045	0.00099	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromodichloromethane	<0.0045		0.0045	0.00075	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromoform	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromomethane	<0.0045	*	0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Carbon disulfide	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloroform	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Dibromochloromethane	<0.0045		0.0045	0.00051	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1-Dichloroethane	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,2-Dichloroethane	<0.0045		0.0045	0.00066	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Styrene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Xylenes, Total	<0.0089		0.0089	0.0017	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
Toluene-d8 (Surr)	*103*		*75 - 122*	*02/17/16 08:40*	*02/24/16 12:54*	*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	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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	☼	02/22/16 07:04	02/27/16 04:19	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Nitrobenzene	<0.036		0.036	0.0089	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Nitrophenol	<0.36		0.36	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Phenanthrene	**0.066**		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Anthracene	**0.014**	**J**	0.036	0.0060	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Fluoranthene	**0.088**		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Pyrene	**0.22**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[a]anthracene	**0.066**		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.093**		0.036	0.0097	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[b]fluoranthene	**0.13**		0.036	0.0077	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[k]fluoranthene	**0.033**	**J**	0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[a]pyrene	**0.094**		0.036	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Indeno[1,2,3-cd]pyrene	**0.099**		0.036	0.0093	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[g,h,i]perylene	**0.11**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*93*		*25 - 110*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Phenol-d5	*94*		*31 - 110*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Nitrobenzene-d5	*90*		*25 - 115*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
2-Fluorobiphenyl	*84*		*25 - 119*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Terphenyl-d14	*179*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 04:19*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.21**	**J**	0.99	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Arsenic	**4.1**		0.49	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Barium	**46**		0.49	0.091	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Beryllium	**0.27**		0.20	0.043	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Boron	**6.2**		2.5	0.35	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Cadmium	**0.13**		0.099	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Calcium	**120000**	**B**	99	32	mg/Kg	☼	02/24/16 08:46	02/26/16 05:23	10
Chromium	**9.5**	**B**	0.49	0.085	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Cobalt	**5.2**		0.25	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Copper	**9.0**		0.49	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Iron	**8800**	**B**	9.9	3.8	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Lead	**15**		0.25	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Magnesium	**71000**	**B**	49	20	mg/Kg	☼	02/24/16 08:46	02/26/16 05:23	10
Manganese	**480**		0.49	0.098	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Nickel	**11**	**B**	0.49	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Potassium	**550**		25	4.0	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Selenium	**0.35**	**J**	0.49	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Silver	**0.090**	**J**	0.25	0.058	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Sodium	**940**		49	6.5	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Thallium	<0.49		0.49	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Vanadium	**13**		0.25	0.072	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Zinc	**33**	**B**	4.9	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 17:52	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.55**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:23	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 22:23	1
Boron	**0.74**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:23	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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		02/23/16 09:14	02/24/16 22:23	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Cobalt	**0.013**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 22:23	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 22:23	1
Manganese	**4.7**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Nickel	**0.017**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 22:23	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Zinc	**0.33**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 22:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.39**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 10:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 17:52	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:52	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.035**		0.017	0.0088	mg/Kg	☼	02/23/16 15:15	02/24/16 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.28**		0.200	0.200	SU			02/20/16 13:18	1

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.

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: 500-107642-9

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)	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 #: 500-107642

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE

Client Project #: 1009241-0008-01

Project Name: IL 3E

Project Location/State: Kane County, IL

Lab Project #: 500 11E64

Sampler: S. Cooper

Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solid					Comments
19		3011-34-B01(0-1)	2/16/16	1450	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

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
[signature]	EE	2/16/16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-9

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, incldluding number and street):
46W 603-691 IL 38 ISGS #3011-35 (Residences)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89853498 (Decimal Degrees) Longitude: -88.52009495 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89853498 Longitude: -88.52009495

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 3011-35-B01, 3011-34-B01, and 3011-37-B02 was sampled within the construction zone adjacent to ISGS #3011-35 (Residences). Refer to PSI Report for ISGS #3011-35 (Residences) including Table 4-4, and Figures 4-5A&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 J107642-10, J107642-9, and J107642-12.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-35 (Residences)	Comparison Criteria			
BORING	3011-35-B01	MACs			TACO
SAMPLE	3011-35-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.23				
VOCs (None Detected)					
SVOCs (mg/kg)					
Benzo[a]anthracene	**0.026 J**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.041**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.06**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.037**	--	--	--	--
Benzo[k]fluoranthene	**0.03 J**	9	--	--	--
Chrysene	**0.038**	88	--	--	--
Fluoranthene	**0.026 J**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.058**	0.9	1.6	0.9	--
Phenanthrene	**0.014 J**	--	--	--	--
Pyrene	**0.085**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.23 J**	5	--	--	--
Arsenic	**4.1**	11.3	13	--	--
Barium	**49**	1,500	--	--	--
Beryllium	**0.35**	22	--	--	--
Boron	**6.8**	40	--	--	--
Cadmium	**0.15**	5.2	--	--	--
Calcium	**100,000**	--	--	--	--
Chromium	**10**	21	--	--	--
Cobalt	**5.4**	20	--	--	--
Copper	**9.9**	2,900	--	--	--
Iron	**9,600**	15,000	15,900	--	--
Lead	**23**	107	--	--	--
Magnesium	**49,000**	325,000	--	--	--
Manganese	**320**	630	636	--	--
Mercury	**0.2**	0.89	--	--	--
Nickel	**12**	100	--	--	--
Potassium	**610**	--	--	--	--
Selenium	**0.38 J**	1.3	--	--	--
Sodium	**1,300**	--	--	--	--
Vanadium	**17**	550	--	--	--
Zinc	**39**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.56**	--	--	--	2
Boron	**0.8**	--	--	--	2
Cobalt	**0.014 J**	--	--	--	1
Manganese	**5.1 L**	--	--	--	0.15
Nickel	**0.017 J**	--	--	--	0.1
Zinc	**0.38 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.59 J L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-33 (Residence)	Comparison Criteria			
BORING	3011-33-B01	MACs			TACO
SAMPLE	3011-33-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (mg/kg)					
2-Butanone (MEK)	**0.013**	--	--	--	--
Acetone	**0.11**	25	--	--	--
SVOCs (mg/kg)					
Anthracene	**0.011 J**	12,000	--	--	--
Benzo[a]anthracene	**0.061**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.081**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.12**	--	--	--	--
Benzo[k]fluoranthene	**0.051**	9	--	--	--
Chrysene	**0.092**	88	--	--	--
Fluoranthene	**0.087**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.088**	0.9	1.6	0.9	--
Phenanthrene	**0.062**	--	--	--	--
Pyrene	**0.2**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.31 J**	5	--	--	--
Arsenic	**4.7**	11.3	13	--	--
Barium	**48**	1,500	--	--	--
Beryllium	**0.29**	22	--	--	--
Boron	**5.7**	40	--	--	--
Cadmium	**0.23**	5.2	--	--	--
Calcium	**110,000**	--	--	--	--
Chromium	**9.8**	21	--	--	--
Cobalt	**5.8**	20	--	--	--
Copper	**10**	2,900	--	--	--
Iron	**9,000**	15,000	15,900	--	--
Lead	**53**	107	--	--	--
Magnesium	**60,000**	325,000	--	--	--
Manganese	**390**	630	636	--	--
Mercury	**0.12**	0.89	--	--	--
Nickel	**12**	100	--	--	--
Potassium	**540**	--	--	--	--
Selenium	**0.48**	1.3	--	--	--
Sodium	**1,700**	--	--	--	--
Thallium	**0.32 J**	2.6	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**54**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45 J**	--	--	--	2
Boron	**0.44 J**	--	--	--	2
Manganese	**0.98 L**	--	--	--	0.15
Zinc	**0.81 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.83 L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-37 (Residence)	Comparison Criteria			
BORING	3011-37-B02	MACs			TACO
SAMPLE	3011-37-B02 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.52				
VOCs (None Detected)					
SVOCs (mg/kg)					
Acenaphthylene	**0.0077** J	--	--	--	--
Anthracene	**0.013** J	12,000	--	--	--
Benzo[a]anthracene	**0.07**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.091** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.16**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	ND U	--	--	--	--
Benzo[k]fluoranthene	**0.059**	9	--	--	--
Chrysene	**0.092**	88	--	--	--
Fluoranthene	**0.12**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.052**	0.9	1.6	0.9	--
Phenanthrene	**0.057**	--	--	--	--
Pyrene	**0.2**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.29** J	5	--	--	--
Arsenic	**3.7**	11.3	13	--	--
Barium	**72**	1,500	--	--	--
Beryllium	**0.27**	22	--	--	--
Boron	**8.1**	40	--	--	--
Cadmium	**0.22**	5.2	--	--	--
Calcium	**150,000**	--	--	--	--
Chromium	**9**	21	--	--	--
Cobalt	**5.2**	20	--	--	--
Copper	**11**	2,900	--	--	--
Iron	**8,600**	15,000	15,900	--	--
Lead	**66**	107	--	--	--
Magnesium	**87,000**	325,000	--	--	--
Manganese	**440**	630	636	--	--
Mercury	**0.19**	0.89	--	--	--
Nickel	**9.8**	100	--	--	--
Potassium	**640**	--	--	--	--
Selenium	**0.53**	1.3	--	--	--
Sodium	**1,400**	--	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**390**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.83**	--	--	--	2
Boron	**0.5**	--	--	--	2
Cobalt	**0.016** J	--	--	--	1
Lead	**0.0084** L	--	--	--	0.0075
Manganese	**6.6** L	--	--	--	0.15
Nickel	**0.039**	--	--	--	0.1
Zinc	**3.1**	--	--	--	5
SPLP Metals (mg/L)					
Lead	**0.22** L	--	--	--	0.0075
Manganese	**1.3** 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: 500-107642-10
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:
2/29/2016 5:11:52 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-10

Job ID: 500-107642-10

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-10

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-35-B01 (0-1) (500-107642-20), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-35-B01 (0-1) (500-107642-20) and (500-107642-E-1-H) 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: 500-107642-10

Client Sample ID: 3011-35-B01 (0-1)

Lab Sample ID: 500-107642-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.014	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.026	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.085		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.026	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.038		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.060		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.030	J	0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.041		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.058		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.037		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.23	J	1.0	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.1		0.51	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	49		0.51	0.093	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.35		0.20	0.044	mg/Kg	1	☼	6010B	Total/NA
Boron	6.8		2.5	0.36	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15		0.10	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	100000	B	100	33	mg/Kg	10	☼	6010B	Total/NA
Chromium	10	B	0.51	0.087	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.4		0.25	0.057	mg/Kg	1	☼	6010B	Total/NA
Copper	9.9		0.51	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	9600	B	10	3.9	mg/Kg	1	☼	6010B	Total/NA
Lead	23		0.25	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	49000	B	5.1	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	320		0.51	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	12	B	0.51	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	610		25	4.1	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.38	J	0.51	0.25	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		51	6.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.25	0.074	mg/Kg	1	☼	6010B	Total/NA
Zinc	39	B	5.1	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.56		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.80		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.014	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	5.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.38	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.59	F1	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.20		0.018	0.0096	mg/Kg	1	☼	7471B	Total/NA
pH	8.23		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-10

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-20	3011-35-B01 (0-1)	Solid	02/16/16 14:55	02/17/16 07:45

Client Sample ID: 3011-35-B01 (0-1)
Date Collected: 02/16/16 14:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-20
Matrix: Solid
Percent Solids: 89.3

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	☼	02/17/16 08:40	02/23/16 18:46	1
Benzene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Bromodichloromethane	<0.0050		0.0050	0.00084	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Bromoform	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Bromomethane	<0.0050	*	0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
2-Butanone (MEK)	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Carbon disulfide	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Carbon tetrachloride	<0.0050		0.0050	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Chlorobenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Chloroethane	<0.0050		0.0050	0.0021	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Chloroform	<0.0050		0.0050	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Chloromethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
cis-1,2-Dichloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
cis-1,3-Dichloropropene	<0.0050		0.0050	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Dibromochloromethane	<0.0050		0.0050	0.00057	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,1-Dichloroethane	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,2-Dichloroethane	<0.0050		0.0050	0.00074	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,1-Dichloroethene	<0.0050		0.0050	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,2-Dichloropropane	<0.0050	*	0.0050	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,3-Dichloropropene, Total	<0.0050		0.0050	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Ethylbenzene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
2-Hexanone	<0.0050		0.0050	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Methylene Chloride	<0.0050		0.0050	0.0038	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Methyl tert-butyl ether	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Styrene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,1,2,2-Tetrachloroethane	<0.0050		0.0050	0.00079	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Tetrachloroethene	<0.0050		0.0050	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Toluene	<0.0050		0.0050	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
trans-1,2-Dichloroethene	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
trans-1,3-Dichloropropene	<0.0050		0.0050	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,1,1-Trichloroethane	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
1,1,2-Trichloroethane	<0.0050		0.0050	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Trichloroethene	<0.0050		0.0050	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Vinyl acetate	<0.0050		0.0050	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Vinyl chloride	<0.0050		0.0050	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1
Xylenes, Total	<0.0099		0.0099	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 122*	*02/17/16 08:40*	*02/23/16 18:46*	*1*
Dibromofluoromethane	*89*		*75 - 120*	*02/17/16 08:40*	*02/23/16 18:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 134*	*02/17/16 08:40*	*02/23/16 18:46*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/17/16 08:40*	*02/23/16 18:46*	*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	☼	02/22/16 07:04	02/27/16 19:20	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1

Client Sample ID: 3011-35-B01 (0-1)
Date Collected: 02/16/16 14:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-20
Matrix: Solid
Percent Solids: 89.3

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	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Phenanthrene	**0.014**	**J**	0.037	0.0052	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Fluoranthene	**0.026**	**J**	0.037	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Pyrene	**0.085**		0.037	0.0074	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Benzo[a]anthracene	**0.026**	**J**	0.037	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1

Client Sample ID: 3011-35-B01 (0-1)
Date Collected: 02/16/16 14:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-20
Matrix: Solid
Percent Solids: 89.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.038**		0.037	0.010	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Benzo[b]fluoranthene	**0.060**		0.037	0.0080	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Benzo[k]fluoranthene	**0.030**	**J**	0.037	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Benzo[a]pyrene	**0.041**		0.037	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Indeno[1,2,3-cd]pyrene	**0.058**		0.037	0.0096	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
Benzo[g,h,i]perylene	**0.037**		0.037	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 19:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*74*		*25 - 110*	*02/22/16 07:04*	*02/27/16 19:20*	*1*
Phenol-d5	*76*		*31 - 110*	*02/22/16 07:04*	*02/27/16 19:20*	*1*
Nitrobenzene-d5	*83*		*25 - 115*	*02/22/16 07:04*	*02/27/16 19:20*	*1*
2-Fluorobiphenyl	*81*		*25 - 119*	*02/22/16 07:04*	*02/27/16 19:20*	*1*
2,4,6-Tribromophenol	*82*		*35 - 137*	*02/22/16 07:04*	*02/27/16 19:20*	*1*
Terphenyl-d14	*190*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 19:20*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.23**	**J**	1.0	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Arsenic	**4.1**		0.51	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Barium	**49**		0.51	0.093	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Beryllium	**0.35**		0.20	0.044	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Boron	**6.8**		2.5	0.36	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Cadmium	**0.15**		0.10	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Calcium	**100000**	**B**	100	33	mg/Kg	☼	02/24/16 08:46	02/26/16 05:27	10
Chromium	**10**	**B**	0.51	0.087	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Cobalt	**5.4**		0.25	0.057	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Copper	**9.9**		0.51	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Iron	**9600**	**B**	10	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Lead	**23**		0.25	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Magnesium	**49000**	**B**	5.1	2.1	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Manganese	**320**		0.51	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Nickel	**12**	**B**	0.51	0.14	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Potassium	**610**		25	4.1	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Selenium	**0.38**	**J**	0.51	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Silver	<0.25		0.25	0.059	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Sodium	**1300**		51	6.7	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Thallium	<0.51		0.51	0.25	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Vanadium	**17**		0.25	0.074	mg/Kg	☼	02/24/16 08:46	02/26/16 03:27	1
Zinc	**39**	**B**	5.1	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 18:36	5

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		02/23/16 09:14	02/24/16 22:30	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 22:30	1
Boron	**0.80**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:30	1

Client Sample ID: 3011-35-B01 (0-1)
Date Collected: 02/16/16 14:55
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-20
Matrix: Solid
Percent Solids: 89.3

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		02/23/16 09:14	02/24/16 22:30	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:30	1
Cobalt	**0.014**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:30	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 22:30	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 22:30	1
Manganese	**5.1**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:30	1
Nickel	**0.017**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:30	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 22:30	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:30	1
Zinc	**0.38**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 22:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.59**	**F1**	0.025	0.010	mg/L		02/23/16 09:24	02/25/16 10:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 17:56	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:56	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		02/22/16 15:15	02/23/16 12:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.20**		0.018	0.0096	mg/Kg	☼	02/23/16 15:15	02/24/16 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.23**		0.200	0.200	SU			02/20/16 13:21	1

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.
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.
¤	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: 500-107642-10

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

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

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

Chain of Custody Record

Lab Job #: 500-107642
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 100934I.0008.01
Project Name: FL 35
Project Location/State: Kane County, FL
Lab Project #: 500IIE64
Sampler: J. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: Voc	Parameter: SVOC	Parameter: TPH Methods	Parameter: TCL/SPLP TPH Methods	Parameter: pH/% Solids	Comments
20		3011-35-B01(0-1)	2/16/16	1455	2	S		X	X	X	X	X	

2/16/16

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)

	Company	Date	Time		Company	Date	Time
Relinquished By	EE	2-16-16	1530	Received By	TA	2/16/16	1530
Relinquished By	TA	2/16/16	1715	Received By	TA-CAT	2/17/16	0745
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: 500-107642-10

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107642-12
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:
2/29/2016 5:12:37 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

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.

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-12

Job ID: 500-107642-12

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-12

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-37-B02 (0-1) (500-107642-22). 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 500-324241 and analytical batch 500-324529 contained Calcium above the reporting limit (RL). Associated samples 3011-37-B02 (0-1) (500-107642-22) and 3011-37-B01 (0-1) (500-107642-23) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 7470A: The continuing calibration verification (CCV) associated with batch 500-324121 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 3011-37-B02 (0-1) (500-107642-22) and 3011-37-B01 (0-1) (500-107642-23).

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: 500-107642-12

Client Sample ID: 3011-37-B02 (0-1)

Lab Sample ID: 500-107642-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0077	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.057		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.12		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.070		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.059		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.091		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.052		0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.29	J	0.90	0.19	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.7		0.45	0.21	mg/Kg	1	☼	6010B	Total/NA
Barium	72		0.45	0.082	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.18	0.039	mg/Kg	1	☼	6010B	Total/NA
Boron	8.1		2.2	0.31	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.22		0.090	0.026	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000		90	29	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.0	B	0.45	0.077	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.45	0.098	mg/Kg	1	☼	6010B	Total/NA
Iron	8600	B	9.0	3.5	mg/Kg	1	☼	6010B	Total/NA
Lead	66		0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	87000		45	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	440	B	0.45	0.089	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.8	B	0.45	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	640		22	3.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.53		0.45	0.22	mg/Kg	1	☼	6010B	Total/NA
Sodium	1400		45	5.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.22	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	390		9.0	2.8	mg/Kg	10	☼	6010B	Total/NA
Barium	0.83		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.50		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.0084		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	6.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.039		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	3.1		0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.22		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	1.3		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.19		0.017	0.0089	mg/Kg	1	☼	7471B	Total/NA
pH	8.52		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-12

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-22	3011-37-B02 (0-1)	Solid	02/16/16 15:00	02/17/16 07:45

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0036	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Benzene	<0.0047		0.0047	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Bromodichloromethane	<0.0047		0.0047	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Bromoform	<0.0047		0.0047	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Bromomethane	<0.0047	*	0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
2-Butanone (MEK)	<0.0047		0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Carbon disulfide	<0.0047		0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Carbon tetrachloride	<0.0047		0.0047	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chlorobenzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chloroethane	<0.0047		0.0047	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chloroform	<0.0047		0.0047	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chloromethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
cis-1,2-Dichloroethene	<0.0047		0.0047	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
cis-1,3-Dichloropropene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Dibromochloromethane	<0.0047		0.0047	0.00054	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1-Dichloroethane	<0.0047		0.0047	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,2-Dichloroethane	<0.0047		0.0047	0.00070	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1-Dichloroethene	<0.0047		0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,2-Dichloropropane	<0.0047	*	0.0047	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,3-Dichloropropene, Total	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Ethylbenzene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Methylene Chloride	<0.0047		0.0047	0.0036	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Methyl tert-butyl ether	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Styrene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1,2,2-Tetrachloroethane	<0.0047		0.0047	0.00075	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Tetrachloroethene	<0.0047		0.0047	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Toluene	<0.0047		0.0047	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
trans-1,2-Dichloroethene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
trans-1,3-Dichloropropene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1,1-Trichloroethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1,2-Trichloroethane	<0.0047		0.0047	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Trichloroethene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Vinyl acetate	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Vinyl chloride	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Xylenes, Total	<0.0094		0.0094	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/23/16 19:37*	*1*
Dibromofluoromethane	*94*		*75 - 120*	*02/17/16 08:40*	*02/23/16 19:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 134*	*02/17/16 08:40*	*02/23/16 19:37*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/17/16 08:40*	*02/23/16 19:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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	☼	02/18/16 18:29	02/29/16 00:18	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Methylnaphthalene	<0.037		0.037	0.0069	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Acenaphthylene	**0.0077**	**J**	0.037	0.0049	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Phenanthrene	**0.057**		0.037	0.0052	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Anthracene	**0.013**	**J**	0.037	0.0063	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Fluoranthene	**0.12**		0.037	0.0069	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Pyrene	**0.20**		0.037	0.0074	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[a]anthracene	**0.070**		0.037	0.0050	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.092**		0.037	0.010	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[b]fluoranthene	**0.16**		0.037	0.0081	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[k]fluoranthene	**0.059**		0.037	0.011	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[a]pyrene	**0.091**		0.037	0.0073	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Indeno[1,2,3-cd]pyrene	**0.052**		0.037	0.0097	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
Phenol-d5	*82*		*31 - 110*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
Nitrobenzene-d5	*61*		*25 - 115*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
2-Fluorobiphenyl	*69*		*25 - 119*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
Terphenyl-d14	*143*	*X*	*36 - 134*	*02/18/16 18:29*	*02/29/16 00:18*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.29**	**J**	0.90	0.19	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Arsenic	**3.7**		0.45	0.21	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Barium	**72**		0.45	0.082	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Beryllium	**0.27**		0.18	0.039	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Boron	**8.1**		2.2	0.31	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Cadmium	**0.22**		0.090	0.026	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Calcium	**150000**		90	29	mg/Kg	☼	02/24/16 09:03	02/26/16 00:28	10
Chromium	**9.0**	**B**	0.45	0.077	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Cobalt	**5.2**		0.22	0.051	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Copper	**11**		0.45	0.098	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Iron	**8600**	**B**	9.0	3.5	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Lead	**66**		0.22	0.11	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Magnesium	**87000**		45	18	mg/Kg	☼	02/24/16 09:03	02/26/16 00:28	10
Manganese	**440**	**B**	0.45	0.089	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Nickel	**9.8**	**B**	0.45	0.12	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Potassium	**640**		22	3.7	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Selenium	**0.53**		0.45	0.22	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Silver	<0.22		0.22	0.053	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Sodium	**1400**		45	5.9	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Thallium	<0.45		0.45	0.22	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Vanadium	**13**		0.22	0.066	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Zinc	**390**		9.0	2.8	mg/Kg	☼	02/24/16 09:03	02/26/16 00:28	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.83**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:18	02/24/16 23:13	1
Boron	**0.50**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:13	1

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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		02/23/16 09:18	02/24/16 23:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Cobalt	**0.016**	**J**	0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:18	02/24/16 23:13	1
Lead	**0.0084**		0.0075	0.0075	mg/L		02/23/16 09:18	02/24/16 23:13	1
Manganese	**6.6**		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Nickel	**0.039**		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:18	02/24/16 23:13	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Zinc	**3.1**		0.50	0.020	mg/L		02/23/16 09:18	02/24/16 23:13	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.22**		0.0075	0.0075	mg/L		02/23/16 09:23	02/25/16 06:33	1
Manganese	**1.3**		0.025	0.010	mg/L		02/23/16 09:23	02/25/16 06:33	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		02/23/16 09:18	02/23/16 18:13	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:18	02/23/16 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		02/22/16 15:15	02/23/16 11:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.19**		0.017	0.0089	mg/Kg	☼	02/23/16 15:15	02/24/16 10:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.52**		0.200	0.200	SU			02/20/16 13:28	1

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.
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: 500-107642-12

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

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

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

Chain of Custody Record

Lab Job #: 500-107642
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 109341.0008.01
Project Name: IL38
Project Location/State: Lake County, IL
Lab Project #: 500-118664
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	Parameter: SVOC	Parameter: Total TAL metals	Parameter: Target TAL metals	Parameter: pH/% Solids	Comments
22		3011-37-B02(0-1)	2/6/16	1500	2	S		X	X	X	X	X	
23		3011-37-B01(0-1)	2/6/16	1510	2	S		X	X	X	X	X	

2/6/16

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
1		EE	2/6/16	1530		TA	2/6/16	1530
2		TA	2/6/16	1715		TA-CHI	2/7/16	0745
3								

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: 500-107642-12

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107642-9
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:
2/29/2016 5:13:04 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

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-9

Job ID: 500-107642-9

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-9

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-34-B01 (0-1) (500-107642-19), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-34-B01 (0-1) (500-107642-19) and (500-107642-E-1-H) 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: 500-107642-9

Client Sample ID: 3011-34-B01 (0-1)

Lab Sample ID: 500-107642-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.066		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.088		0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.22		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.066		0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.093		0.036	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.036	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.033	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.094		0.036	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.099		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
Antimony	0.21	J	0.99	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.1		0.49	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	46		0.49	0.091	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	6.2		2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13		0.099	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	99	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.5	B	0.49	0.085	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.25	0.056	mg/Kg	1	☼	6010B	Total/NA
Copper	9.0		0.49	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	8800	B	9.9	3.8	mg/Kg	1	☼	6010B	Total/NA
Lead	15		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	71000	B	49	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	480		0.49	0.098	mg/Kg	1	☼	6010B	Total/NA
Nickel	11	B	0.49	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	550		25	4.0	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.35	J	0.49	0.24	mg/Kg	1	☼	6010B	Total/NA
Silver	0.090	J	0.25	0.058	mg/Kg	1	☼	6010B	Total/NA
Sodium	940		49	6.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.25	0.072	mg/Kg	1	☼	6010B	Total/NA
Zinc	33	B	4.9	1.6	mg/Kg	5	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.74		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	4.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.33	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.39		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.035		0.017	0.0088	mg/Kg	1	☼	7471B	Total/NA
pH	8.28		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-9

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-19	3011-34-B01 (0-1)	Solid	02/16/16 14:50	02/17/16 07:45

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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	☼	02/17/16 08:40	02/24/16 12:54	1
Benzene	<0.0045		0.0045	0.00099	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromodichloromethane	<0.0045		0.0045	0.00075	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromoform	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Bromomethane	<0.0045	*	0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Carbon disulfide	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloroform	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Chloromethane	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Dibromochloromethane	<0.0045		0.0045	0.00051	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1-Dichloroethane	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,2-Dichloroethane	<0.0045		0.0045	0.00066	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00092	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Styrene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1
Xylenes, Total	<0.0089		0.0089	0.0017	mg/Kg	☼	02/17/16 08:40	02/24/16 12:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/17/16 08:40*	*02/24/16 12:54*	*1*
Toluene-d8 (Surr)	*103*		*75 - 122*	*02/17/16 08:40*	*02/24/16 12:54*	*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	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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	☼	02/22/16 07:04	02/27/16 04:19	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Nitrobenzene	<0.036		0.036	0.0089	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2-Nitrophenol	<0.36		0.36	0.084	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Phenanthrene	**0.066**		0.036	0.0050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Anthracene	**0.014**	**J**	0.036	0.0060	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Fluoranthene	**0.088**		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Pyrene	**0.22**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[a]anthracene	**0.066**		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.093**		0.036	0.0097	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[b]fluoranthene	**0.13**		0.036	0.0077	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[k]fluoranthene	**0.033**	**J**	0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[a]pyrene	**0.094**		0.036	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Indeno[1,2,3-cd]pyrene	**0.099**		0.036	0.0093	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
Benzo[g,h,i]perylene	**0.11**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/22/16 07:04	02/27/16 04:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*93*		*25 - 110*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Phenol-d5	*94*		*31 - 110*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Nitrobenzene-d5	*90*		*25 - 115*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
2-Fluorobiphenyl	*84*		*25 - 119*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/22/16 07:04*	*02/27/16 04:19*	*1*
Terphenyl-d14	*179*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 04:19*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.21**	**J**	0.99	0.21	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Arsenic	**4.1**		0.49	0.23	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Barium	**46**		0.49	0.091	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Beryllium	**0.27**		0.20	0.043	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Boron	**6.2**		2.5	0.35	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Cadmium	**0.13**		0.099	0.029	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Calcium	**120000**	**B**	99	32	mg/Kg	☼	02/24/16 08:46	02/26/16 05:23	10
Chromium	**9.5**	**B**	0.49	0.085	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Cobalt	**5.2**		0.25	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Copper	**9.0**		0.49	0.11	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Iron	**8800**	**B**	9.9	3.8	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Lead	**15**		0.25	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Magnesium	**71000**	**B**	49	20	mg/Kg	☼	02/24/16 08:46	02/26/16 05:23	10
Manganese	**480**		0.49	0.098	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Nickel	**11**	**B**	0.49	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Potassium	**550**		25	4.0	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Selenium	**0.35**	**J**	0.49	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Silver	**0.090**	**J**	0.25	0.058	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Sodium	**940**		49	6.5	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Thallium	<0.49		0.49	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Vanadium	**13**		0.25	0.072	mg/Kg	☼	02/24/16 08:46	02/26/16 03:22	1
Zinc	**33**	**B**	4.9	1.6	mg/Kg	☼	02/24/16 08:46	02/26/16 17:52	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.55**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:23	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 22:23	1
Boron	**0.74**		0.50	0.050	mg/L		02/23/16 09:14	02/24/16 22:23	1

Client Sample ID: 3011-34-B01 (0-1)
Date Collected: 02/16/16 14:50
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-19
Matrix: Solid
Percent Solids: 89.6

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		02/23/16 09:14	02/24/16 22:23	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Cobalt	**0.013**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 22:23	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 22:23	1
Manganese	**4.7**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Nickel	**0.017**	**J**	0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 22:23	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 22:23	1
Zinc	**0.33**	**J B**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 22:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.39**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 10:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:14	02/23/16 17:52	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:52	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.035**		0.017	0.0088	mg/Kg	☼	02/23/16 15:15	02/24/16 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.28**		0.200	0.200	SU			02/20/16 13:18	1

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.

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: 500-107642-9

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

Chain of Custody Record

Report To (optional)	Bill To (optional)
Contact:	Contact:
Company:	Company:
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail:	PO#/Reference#

Lab Job #: 500-107642

Chain of Custody Number:

Page ___ of ___

Temperature °C of Cooler:

Client: EE
Client Project #: 1009341-0008-01
Project Name: IL 3E
Project Location/State: Kane County, IL
Lab Project #: 500112E4
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
19		3011-34-B01(0-1)	2/16/16	1450	2	S	✓	X	X	X	X					

2/16/16

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
[signature]	EE	2/16/16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sherri Scott	TA-CHI	2/17/16	0745

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: 500-107642-9

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 600 block of IL 38 ISGS #3011-36 (Vacant Land)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.89859173 (Decimal Degrees) Longitude: -88.52066006 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89859173 Longitude: -88.52066006

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 3011-36-B01, and 3011-33-B01 were sampled within the construction zone adjacent to ISGS #3011-36 (Vacant Land). Refer to PSI Report for ISGS #3011-36 (Vacant Land) including Table 4-4, and Figures 4-5A&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 J107642-11, and J107642-8.

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:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-36 (Vacant Land)		Comparison Criteria			
BORING	3011-36-B01		MACs			TACO
SAMPLE	3011-36-B01 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.1					
VOCs (None Detected)						
SVOCs (mg/kg)						
Benzo[a]anthracene	**0.017**	**J**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.026**	**J**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.046**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.016**	**J**	--	--	--	--
Benzo[k]fluoranthene	**0.014**	**J**	9	--	--	--
Chrysene	**0.023**	**J**	88	--	--	--
Fluoranthene	**0.027**	**J**	3,100	--	--	--
Phenanthrene	**0.015**	**J**	--	--	--	--
Pyrene	**0.046**		2,300	--	--	--
Inorganics (mg/kg)						
Antimony	**0.35**	**J**	5	--	--	--
Arsenic	**3.8**		11.3	13	--	--
Barium	**56**	**J**	1,500	--	--	--
Beryllium	**0.26**		22	--	--	--
Boron	**6.6**	**J**	40	--	--	--
Cadmium	**0.26**	**J**	5.2	--	--	--
Calcium	**110,000**	**J**	--	--	--	--
Chromium	**16**	**J**	21	--	--	--
Cobalt	**5.5**	**J**	20	--	--	--
Copper	**10**	**J**	2,900	--	--	--
Iron	**8,500**	**J**	15,000	15,900	--	--
Lead	**82**	**J**	107	--	--	--
Magnesium	**65,000**	**J**	325,000	--	--	--
Manganese	**560**	**J**	630	636	--	--
Mercury	**0.098**		0.89	--	--	--
Nickel	**10**	**J**	100	--	--	--
Potassium	**650**	**J**	--	--	--	--
Selenium	**0.5**	**J**	1.3	--	--	--
Sodium	**810**		--	--	--	--
Vanadium	**15**		550	--	--	--
Zinc	**47**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.59**		--	--	--	2
Boron	**0.6**		--	--	--	2
Manganese	**1.9**	**L**	--	--	--	0.15
Zinc	**0.25**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.17**	**L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-33 (Residence)	Comparison Criteria			
BORING	3011-33-B01	MACs			TACO
SAMPLE	3011-33-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.29				
VOCs (mg/kg)					
2-Butanone (MEK)	**0.013**	--	--	--	--
Acetone	**0.11**	25	--	--	--
SVOCs (mg/kg)					
Anthracene	**0.011 J**	12,000	--	--	--
Benzo[a]anthracene	**0.061**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.081**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.13**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.12**	--	--	--	--
Benzo[k]fluoranthene	**0.051**	9	--	--	--
Chrysene	**0.092**	88	--	--	--
Fluoranthene	**0.087**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	**0.088**	0.9	1.6	0.9	--
Phenanthrene	**0.062**	--	--	--	--
Pyrene	**0.2**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.31 J**	5	--	--	--
Arsenic	**4.7**	11.3	13	--	--
Barium	**48**	1,500	--	--	--
Beryllium	**0.29**	22	--	--	--
Boron	**5.7**	40	--	--	--
Cadmium	**0.23**	5.2	--	--	--
Calcium	**110,000**	--	--	--	--
Chromium	**9.8**	21	--	--	--
Cobalt	**5.8**	20	--	--	--
Copper	**10**	2,900	--	--	--
Iron	**9,000**	15,000	15,900	--	--
Lead	**53**	107	--	--	--
Magnesium	**60,000**	325,000	--	--	--
Manganese	**390**	630	636	--	--
Mercury	**0.12**	0.89	--	--	--
Nickel	**12**	100	--	--	--
Potassium	**540**	--	--	--	--
Selenium	**0.48**	1.3	--	--	--
Sodium	**1,700**	--	--	--	--
Thallium	**0.32 J**	2.6	--	--	--
Vanadium	**13**	550	--	--	--
Zinc	**54**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.45 J**	--	--	--	2
Boron	**0.44 J**	--	--	--	2
Manganese	**0.98 L**	--	--	--	0.15
Zinc	**0.81 J**	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**0.83 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: 500-107642-11
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:
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Case Narrative

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

TestAmerica Job ID: 500-107642-11

Job ID: 500-107642-11

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-11

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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
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 500-324241 and analytical batch 500-324529 contained Calcium above the reporting limit (RL). Associated sample 3011-36-B01 (0-1) (500-107642-21) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 7470A: The continuing calibration verification (CCV) associated with batch 500-324121 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 500-324121/23).

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: 500-107642-11

Client Sample ID: 3011-36-B01 (0-1)

Lab Sample ID: 500-107642-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.015	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.027	J	0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.046		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.017	J	0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.023	J	0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.046		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.014	J	0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.026	J	0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.016	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.35	J F1	1.0	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.8		0.50	0.23	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.50	0.092	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.26		0.20	0.043	mg/Kg	1	☼	6010B	Total/NA
Boron	6.6	F1	2.5	0.35	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.26	F1	0.10	0.029	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	F2 B	100	32	mg/Kg	10	☼	6010B	Total/NA
Chromium	16	F1 B	0.50	0.086	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.5		0.25	0.057	mg/Kg	1	☼	6010B	Total/NA
Copper	10		0.50	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	8500	F2 B	10	3.9	mg/Kg	1	☼	6010B	Total/NA
Lead	82		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	65000	F2 B	50	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	560	F2 B	0.50	0.099	mg/Kg	1	☼	6010B	Total/NA
Nickel	10	B	0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	650	F1	25	4.1	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.50	F1	0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Sodium	810		50	6.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.25	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	47	F1	10	3.2	mg/Kg	10	☼	6010B	Total/NA
Barium	0.59		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.60		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.9		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.25	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.17		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.098		0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	8.10		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-11

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-21	3011-36-B01 (0-1)	Solid	02/16/16 09:20	02/17/16 07:45

Client Sample ID: 3011-36-B01 (0-1)
Date Collected: 02/16/16 09:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-21
Matrix: Solid
Percent Solids: 84.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0038	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Benzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Bromodichloromethane	<0.0049		0.0049	0.00082	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Bromoform	<0.0049		0.0049	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Bromomethane	<0.0049	*	0.0049	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
2-Butanone (MEK)	<0.0049		0.0049	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Carbon disulfide	<0.0049		0.0049	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Carbon tetrachloride	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Chlorobenzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Chloroethane	<0.0049		0.0049	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Chloroform	<0.0049		0.0049	0.00095	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Chloromethane	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
cis-1,2-Dichloroethene	<0.0049		0.0049	0.00099	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
cis-1,3-Dichloropropene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Dibromochloromethane	<0.0049		0.0049	0.00056	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,1-Dichloroethane	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,2-Dichloroethane	<0.0049		0.0049	0.00072	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,1-Dichloroethene	<0.0049		0.0049	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,2-Dichloropropane	<0.0049	*	0.0049	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,3-Dichloropropene, Total	<0.0049		0.0049	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Ethylbenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Methylene Chloride	<0.0049		0.0049	0.0037	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Methyl tert-butyl ether	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Styrene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,1,2,2-Tetrachloroethane	<0.0049		0.0049	0.00077	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Tetrachloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Toluene	<0.0049		0.0049	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
trans-1,2-Dichloroethene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
trans-1,3-Dichloropropene	<0.0049		0.0049	0.0014	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,1,1-Trichloroethane	<0.0049		0.0049	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
1,1,2-Trichloroethane	<0.0049		0.0049	0.00094	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Trichloroethene	<0.0049		0.0049	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Vinyl acetate	<0.0049		0.0049	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Vinyl chloride	<0.0049		0.0049	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1
Xylenes, Total	<0.0097		0.0097	0.0018	mg/Kg	☼	02/17/16 08:40	02/23/16 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 122*	*02/17/16 08:40*	*02/23/16 19:12*	*1*
Dibromofluoromethane	*94*		*75 - 120*	*02/17/16 08:40*	*02/23/16 19:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 134*	*02/17/16 08:40*	*02/23/16 19:12*	*1*
Toluene-d8 (Surr)	*105*		*75 - 122*	*02/17/16 08:40*	*02/23/16 19:12*	*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 18:29	02/28/16 23:49	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1

Client Sample ID: 3011-36-B01 (0-1)
Date Collected: 02/16/16 09:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-21
Matrix: Solid
Percent Solids: 84.6

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	0.045	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2-Methylnaphthalene	<0.037		0.037	0.0069	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Acenaphthylene	<0.037		0.037	0.0050	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Phenanthrene	**0.015**	**J**	0.037	0.0052	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Fluoranthene	**0.027**	**J**	0.037	0.0070	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Pyrene	**0.046**		0.037	0.0075	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Benzo[a]anthracene	**0.017**	**J**	0.037	0.0051	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1

Client Sample ID: 3011-36-B01 (0-1)
Date Collected: 02/16/16 09:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-21
Matrix: Solid
Percent Solids: 84.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.023**	**J**	0.037	0.010	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Benzo[b]fluoranthene	**0.046**		0.037	0.0081	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Benzo[k]fluoranthene	**0.014**	**J**	0.037	0.011	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Benzo[a]pyrene	**0.026**	**J**	0.037	0.0073	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0073	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
Benzo[g,h,i]perylene	**0.016**	**J**	0.037	0.012	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 18:29	02/28/16 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*73*		*25 - 110*	*02/18/16 18:29*	*02/28/16 23:49*	*1*
Phenol-d5	*70*		*31 - 110*	*02/18/16 18:29*	*02/28/16 23:49*	*1*
Nitrobenzene-d5	*54*		*25 - 115*	*02/18/16 18:29*	*02/28/16 23:49*	*1*
2-Fluorobiphenyl	*62*		*25 - 119*	*02/18/16 18:29*	*02/28/16 23:49*	*1*
2,4,6-Tribromophenol	*51*		*35 - 137*	*02/18/16 18:29*	*02/28/16 23:49*	*1*
Terphenyl-d14	*115*		*36 - 134*	*02/18/16 18:29*	*02/28/16 23:49*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.35**	**J F1**	1.0	0.21	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Arsenic	**3.8**		0.50	0.23	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Barium	**56**		0.50	0.092	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Beryllium	**0.26**		0.20	0.043	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Boron	**6.6**	**F1**	2.5	0.35	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Cadmium	**0.26**	**F1**	0.10	0.029	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Calcium	**110000**	**F2 B**	100	32	mg/Kg	☼	02/24/16 09:03	02/25/16 23:54	10
Chromium	**16**	**F1 B**	0.50	0.086	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Cobalt	**5.5**		0.25	0.057	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Copper	**10**		0.50	0.11	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Iron	**8500**	**F2 B**	10	3.9	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Lead	**82**		0.25	0.12	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Magnesium	**65000**	**F2 B**	50	20	mg/Kg	☼	02/24/16 09:03	02/25/16 23:54	10
Manganese	**560**	**F2 B**	0.50	0.099	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Nickel	**10**	**B**	0.50	0.14	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Potassium	**650**	**F1**	25	4.1	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Selenium	**0.50**	**F1**	0.50	0.25	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Silver	<0.25		0.25	0.059	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Sodium	**810**		50	6.6	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Vanadium	**15**		0.25	0.073	mg/Kg	☼	02/24/16 09:03	02/26/16 13:23	1
Zinc	**47**	**F1**	10	3.2	mg/Kg	☼	02/24/16 09:03	02/25/16 23:54	10

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		02/23/16 09:18	02/24/16 23:06	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:18	02/24/16 23:06	1
Boron	**0.60**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:06	1

Client Sample ID: 3011-36-B01 (0-1)
Date Collected: 02/16/16 09:20
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-21
Matrix: Solid
Percent Solids: 84.6

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		02/23/16 09:18	02/24/16 23:06	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:06	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:06	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:18	02/24/16 23:06	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:18	02/24/16 23:06	1
Manganese	**1.9**		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:06	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:06	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:18	02/24/16 23:06	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:06	1
Zinc	**0.25**	**J**	0.50	0.020	mg/L		02/23/16 09:18	02/24/16 23:06	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		02/23/16 09:23	02/25/16 06:26	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		02/23/16 09:18	02/23/16 18:09	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:18	02/23/16 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		02/22/16 15:15	02/23/16 11:03	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.098**		0.019	0.010	mg/Kg	☼	02/23/16 15:15	02/24/16 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.10**		0.200	0.200	SU			02/20/16 13:25	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-11

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.

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.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance 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.
¤	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: 500-107642-11

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

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

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

Chain of Custody Record

Lab Job #: 500-107642
Chain of Custody Number:
Page _____ of _____
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341-0008.01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 500U864
Sampler: S. Cooper
Lab PM: Dwight

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	Parameter: SVOC	Parameter: Total TAL Metals	Parameter: Total SPLP TAL Metals	Parameter: PH/% Solids	Comments
21		Soil-36-B01(0-1)	2/10/16	0900	2	S		X	X	X	X	X	

2-16-16

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)

	Company	Date	Time
Relinquished By	EE	2-16-16	1530
Relinquished By	TA	2/16/16	1715
Relinquished By			

	Company	Date	Time
Received By	TA	2/16/16	1530
Received By	TA-CHI	2/17/16	0745
Received By			

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: 500-107642-11

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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: 500-107642-8
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:
2/29/2016 5:10:40 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

Table of Contents

Job ID: 500-107642-8

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-8

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-33-B01 (0-1) (500-107642-18), (500-107642-E-1-B MS) and (500-107642-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 500-324239 and analytical batch 500-324569 contained Calcium, Chromium, and Magnesium above the reporting limit (RL). Associated samples 3011-33-B01 (0-1) (500-107642-18) and (500-107642-E-1-H) 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: 500-107642-8

Client Sample ID: 3011-33-B01 (0-1)

Lab Sample ID: 500-107642-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.11		0.022	0.0043	mg/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	0.013		0.0056	0.0020	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.062		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.087		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.061		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.051		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.081		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.088		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.31	J	0.96	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.7		0.48	0.22	mg/Kg	1	☼	6010B	Total/NA
Barium	48		0.48	0.088	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.19	0.042	mg/Kg	1	☼	6010B	Total/NA
Boron	5.7		2.4	0.34	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23		0.096	0.028	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	96	31	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.8	B	0.48	0.083	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.8		0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Copper	10		0.48	0.10	mg/Kg	1	☼	6010B	Total/NA
Iron	9000	B	9.6	3.7	mg/Kg	1	☼	6010B	Total/NA
Lead	53		0.24	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	60000	B	48	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	390		0.48	0.096	mg/Kg	1	☼	6010B	Total/NA
Nickel	12	B	0.48	0.13	mg/Kg	1	☼	6010B	Total/NA
Potassium	540		24	3.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.48		0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		48	6.4	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.32	J	0.48	0.24	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.24	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	54	B	4.8	1.5	mg/Kg	5	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.98		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.81	B F1	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.83		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.12		0.018	0.0095	mg/Kg	1	☼	7471B	Total/NA
pH	8.29		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-8

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-18	3011-33-B01 (0-1)	Solid	02/16/16 09:30	02/17/16 07:45

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.11**		0.022	0.0043	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Benzene	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromodichloromethane	<0.0056		0.0056	0.00094	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromoform	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Bromomethane	<0.0056	*	0.0056	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
2-Butanone (MEK)	**0.013**		0.0056	0.0020	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Carbon disulfide	<0.0056		0.0056	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Carbon tetrachloride	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chlorobenzene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloroethane	<0.0056		0.0056	0.0023	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloroform	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Chloromethane	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
cis-1,2-Dichloroethene	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
cis-1,3-Dichloropropene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Dibromochloromethane	<0.0056		0.0056	0.00064	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1-Dichloroethane	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,2-Dichloroethane	<0.0056		0.0056	0.00083	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1-Dichloroethene	<0.0056		0.0056	0.0020	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,2-Dichloropropane	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,3-Dichloropropene, Total	<0.0056		0.0056	0.0016	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Ethylbenzene	<0.0056		0.0056	0.0014	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
2-Hexanone	<0.0056		0.0056	0.0017	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Methylene Chloride	<0.0056		0.0056	0.0042	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Methyl tert-butyl ether	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Styrene	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,2,2-Tetrachloroethane	<0.0056		0.0056	0.00089	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Tetrachloroethene	<0.0056		0.0056	0.0012	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Toluene	<0.0056		0.0056	0.0019	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
trans-1,2-Dichloroethene	<0.0056		0.0056	0.0014	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
trans-1,3-Dichloropropene	<0.0056		0.0056	0.0016	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,1-Trichloroethane	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
1,1,2-Trichloroethane	<0.0056		0.0056	0.0011	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Trichloroethene	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Vinyl acetate	<0.0056		0.0056	0.0015	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Vinyl chloride	<0.0056		0.0056	0.0013	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1
Xylenes, Total	<0.011		0.011	0.0021	mg/Kg	☼	02/16/16 09:30	02/24/16 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 122*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
Dibromofluoromethane	*99*		*75 - 120*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 134*	*02/16/16 09:30*	*02/24/16 18:01*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/16/16 09:30*	*02/24/16 18:01*	*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	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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	0.044	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Phenanthrene	**0.062**		0.036	0.0051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Anthracene	**0.011**	**J**	0.036	0.0061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Fluoranthene	**0.087**		0.036	0.0068	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Pyrene	**0.20**		0.036	0.0072	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[a]anthracene	**0.061**		0.036	0.0049	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.092**		0.036	0.0099	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[b]fluoranthene	**0.13**		0.036	0.0079	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[k]fluoranthene	**0.051**		0.036	0.011	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[a]pyrene	**0.081**		0.036	0.0071	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Indeno[1,2,3-cd]pyrene	**0.088**		0.036	0.0095	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
Benzo[g,h,i]perylene	**0.12**		0.036	0.012	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/22/16 07:04	02/27/16 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*77*		*25 - 110*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Phenol-d5	*81*		*31 - 110*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Nitrobenzene-d5	*74*		*25 - 115*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
2-Fluorobiphenyl	*72*		*25 - 119*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/22/16 07:04*	*02/27/16 03:50*	*1*
Terphenyl-d14	*168*	*X*	*36 - 134*	*02/22/16 07:04*	*02/27/16 03:50*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.31**	**J**	0.96	0.20	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Arsenic	**4.7**		0.48	0.22	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Barium	**48**		0.48	0.088	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Beryllium	**0.29**		0.19	0.042	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Boron	**5.7**		2.4	0.34	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Cadmium	**0.23**		0.096	0.028	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Calcium	**110000**	**B**	96	31	mg/Kg	☼	02/24/16 08:46	02/26/16 05:18	10
Chromium	**9.8**	**B**	0.48	0.083	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Cobalt	**5.8**		0.24	0.055	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Copper	**10**		0.48	0.10	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Iron	**9000**	**B**	9.6	3.7	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Lead	**53**		0.24	0.12	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Magnesium	**60000**	**B**	48	20	mg/Kg	☼	02/24/16 08:46	02/26/16 05:18	10
Manganese	**390**		0.48	0.096	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Nickel	**12**	**B**	0.48	0.13	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Potassium	**540**		24	3.9	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Selenium	**0.48**		0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Silver	<0.24		0.24	0.056	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Sodium	**1700**		48	6.4	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Thallium	**0.32**	**J**	0.48	0.24	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Vanadium	**13**		0.24	0.070	mg/Kg	☼	02/24/16 08:46	02/26/16 03:17	1
Zinc	**54**	**B**	4.8	1.5	mg/Kg	☼	02/24/16 08:46	02/26/16 17:45	5

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		02/23/16 09:14	02/24/16 21:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:14	02/24/16 21:56	1
Boron	**0.44**	**J**	0.50	0.050	mg/L		02/23/16 09:14	02/24/16 21:56	1

Client Sample ID: 3011-33-B01 (0-1)
Date Collected: 02/16/16 09:30
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-18
Matrix: Solid
Percent Solids: 87.2

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		02/23/16 09:14	02/24/16 21:56	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:14	02/24/16 21:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:14	02/24/16 21:56	1
Manganese	**0.98**		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Nickel	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:14	02/24/16 21:56	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:14	02/24/16 21:56	1
Zinc	**0.81**	**B F1**	0.50	0.020	mg/L		02/23/16 09:14	02/24/16 21:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.83**		0.025	0.010	mg/L		02/23/16 09:24	02/25/16 09:54	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		02/23/16 09:14	02/23/16 17:24	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:14	02/23/16 17:24	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		02/22/16 15:15	02/23/16 12:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.12**		0.018	0.0095	mg/Kg	☼	02/23/16 15:15	02/24/16 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.29**		0.200	0.200	SU			02/20/16 13:10	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107642-8

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.
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.
¤	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: 500-107642-8

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)	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 #: 500-107642

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE
Client Project #: 1009741-0008-01
Project Name: IL 38
Project Location/State: Kane County IL
Lab Project #: 58011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
18		3011-33-B01 (0-1)	2-16-16	0930	2	S	X	X	X	X	X					

2-16-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-16-16	1530	[signature]	TA	2/16/16	1530
[signature]	TA	2/16/16	1715	Sheri Scott	TA-CHI	2/17/16	0745

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: 500-107642-8

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, incldluding number and street):
46W 571 IL 38 ISGS #3011-37 (Residence)

City: Maple Park State: IL Zip Code: 60151

County: Kane Township: Virgil

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

Latitude: 41.898646 (Decimal Degrees) Longitude: -88.517941 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.898646 Longitude: -88.517941

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 3011-37-B01 and B02 were sampled within the construction zone adjacent to ISGS #3011-37 (Residence). Refer to PSI Report for ISGS #3011-37 (Residence) including Table 4-4, and Figures 4-6A&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 J107642-12.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-37 (Residence)		Comparison Criteria			
BORING	3011-37-B01	3011-37-B02	MACs			TACO
SAMPLE	3011-37-B01 (0-1)	3011-37-B02 (0-1)				
MATRIX	Soil	Soil				
DEPTH (feet)	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.47	8.52				
VOCs (None Detected)						
SVOCs (mg/kg)						
Acenaphthylene	ND U	**0.0077 J**	--	--	--	--
Anthracene	ND U	**0.013 J**	12,000	--	--	--
Benzo[a]anthracene	**0.015 J**	**0.07**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.021 J**	**0.091** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.037**	**0.16**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.013 J**	ND U	--	--	--	--
Benzo[k]fluoranthene	**0.011 J**	**0.059**	9	--	--	--
Chrysene	**0.021 J**	**0.092**	88	--	--	--
Fluoranthene	**0.032 J**	**0.12**	3,100	--	--	--
Indeno[1,2,3-cd]pyrene	ND U	**0.052**	0.9	1.6	0.9	--
Phenanthrene	**0.011 J**	**0.057**	--	--	--	--
Pyrene	**0.029 J**	**0.2**	2,300	--	--	--
Inorganics (mg/kg)						
Antimony	**0.22 J**	**0.29 J**	5	--	--	--
Arsenic	**4.7**	**3.7**	11.3	13	--	--
Barium	**59**	**72**	1,500	--	--	--
Beryllium	**0.3**	**0.27**	22	--	--	--
Boron	**6**	**8.1**	40	--	--	--
Cadmium	**0.14**	**0.22**	5.2	--	--	--
Calcium	**110,000**	**150,000**	--	--	--	--
Chromium	**8.8**	**9**	21	--	--	--
Cobalt	**6.5**	**5.2**	20	--	--	--
Copper	**11**	**11**	2,900	--	--	--
Iron	**10,000**	**8,600**	15,000	15,900	--	--
Lead	**20**	**66**	107	--	--	--
Magnesium	**66,000**	**87,000**	325,000	--	--	--
Manganese	**500**	**440**	630	636	--	--
Mercury	**0.054**	**0.19**	0.89	--	--	--
Nickel	**14**	**9.8**	100	--	--	--
Potassium	**790**	**640**	--	--	--	--
Selenium	**0.3 J**	**0.53**	1.3	--	--	--
Sodium	**1,200**	**1,400**	--	--	--	--
Vanadium	**15**	**13**	550	--	--	--
Zinc	**42**	**390**	5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.6**	**0.83**	--	--	--	2
Boron	**0.57**	**0.5**	--	--	--	2
Cobalt	ND U	**0.016 J**	--	--	--	1
Lead	ND U	**0.0084 L**	--	--	--	0.0075
Manganese	**3.2 L**	**6.6 L**	--	--	--	0.15
Nickel	**0.017 J**	**0.039**	--	--	--	0.1
Zinc	**0.22 J**	**3.1**	--	--	--	5
SPLP Metals (mg/L)						
Lead	NA	**0.22 L**	--	--	--	0.0075
Manganese	**0.38 L**	**1.3 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: 500-107642-12
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:
2/29/2016 5:12:37 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

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.

Table of Contents

Case Narrative

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

TestAmerica Job ID: 500-107642-12

Job ID: 500-107642-12

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107642-12

Comments
No additional comments.

Receipt
The samples were received on 2/17/2016 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.5º C, 2.8º C, 3.2º C and 3.5º C.

GC/MS VOA
Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 500-324046: 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 500-324046 recovered outside control limits for the following analyte: 1,2-Dichloropropane. 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 500-324219: 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 sample contained one acid surrogate and/or one base/neutral surrogate outside acceptance limits: 3011-37-B02 (0-1) (500-107642-22). 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 500-324241 and analytical batch 500-324529 contained Calcium above the reporting limit (RL). Associated samples 3011-37-B02 (0-1) (500-107642-22) and 3011-37-B01 (0-1) (500-107642-23) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 7470A: The continuing calibration verification (CCV) associated with batch 500-324121 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 3011-37-B02 (0-1) (500-107642-22) and 3011-37-B01 (0-1) (500-107642-23).

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: 500-107642-12

Client Sample ID: 3011-37-B02 (0-1) — Lab Sample ID: 500-107642-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0077	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.057		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.12		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.070		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.059		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.091		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.052		0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.29	J	0.90	0.19	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.7		0.45	0.21	mg/Kg	1	☼	6010B	Total/NA
Barium	72		0.45	0.082	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.27		0.18	0.039	mg/Kg	1	☼	6010B	Total/NA
Boron	8.1		2.2	0.31	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.22		0.090	0.026	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000		90	29	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.0	B	0.45	0.077	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.45	0.098	mg/Kg	1	☼	6010B	Total/NA
Iron	8600	B	9.0	3.5	mg/Kg	1	☼	6010B	Total/NA
Lead	66		0.22	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	87000		45	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	440	B	0.45	0.089	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.8	B	0.45	0.12	mg/Kg	1	☼	6010B	Total/NA
Potassium	640		22	3.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.53		0.45	0.22	mg/Kg	1	☼	6010B	Total/NA
Sodium	1400		45	5.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.22	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	390		9.0	2.8	mg/Kg	10	☼	6010B	Total/NA
Barium	0.83		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.50		0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.0084		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	6.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.039		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	3.1		0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.22		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	1.3		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.19		0.017	0.0089	mg/Kg	1	☼	7471B	Total/NA
pH	8.52		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-37-B01 (0-1) — Lab Sample ID: 500-107642-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.011	J	0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.032	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.029	J	0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.015	J	0.036	0.0048	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: 500-107642-12

Client Sample ID: 3011-37-B01 (0-1) (Continued)

Lab Sample ID: 500-107642-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	0.021	J	0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.037		0.036	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.011	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.021	J	0.036	0.0069	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.013	J	0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.22	J	0.83	0.17	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.7		0.41	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	59		0.41	0.076	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.17	0.036	mg/Kg	1	☼	6010B	Total/NA
Boron	6.0		2.1	0.29	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14		0.083	0.024	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000		83	27	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.8	B	0.41	0.071	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.5		0.21	0.047	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.41	0.090	mg/Kg	1	☼	6010B	Total/NA
Iron	10000	B	8.3	3.2	mg/Kg	1	☼	6010B	Total/NA
Lead	20		0.21	0.10	mg/Kg	1	☼	6010B	Total/NA
Magnesium	66000		41	17	mg/Kg	10	☼	6010B	Total/NA
Manganese	500	B	0.41	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	14	B	0.41	0.11	mg/Kg	1	☼	6010B	Total/NA
Potassium	790		21	3.4	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.30	J	0.41	0.21	mg/Kg	1	☼	6010B	Total/NA
Sodium	1200		41	5.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.21	0.060	mg/Kg	1	☼	6010B	Total/NA
Zinc	42		8.3	2.6	mg/Kg	10	☼	6010B	Total/NA
Barium	0.60		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.57		0.50	0.050	mg/L	1		6010B	TCLP
Manganese	3.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.22	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.38		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.054		0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.47		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107642-12

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107642-22	3011-37-B02 (0-1)	Solid	02/16/16 15:00	02/17/16 07:45
500-107642-23	3011-37-B01 (0-1)	Solid	02/16/16 15:10	02/17/16 07:45

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0036	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Benzene	<0.0047		0.0047	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Bromodichloromethane	<0.0047		0.0047	0.00080	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Bromoform	<0.0047		0.0047	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Bromomethane	<0.0047	*	0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
2-Butanone (MEK)	<0.0047		0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Carbon disulfide	<0.0047		0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Carbon tetrachloride	<0.0047		0.0047	0.0010	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chlorobenzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chloroethane	<0.0047		0.0047	0.0020	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chloroform	<0.0047		0.0047	0.00092	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Chloromethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
cis-1,2-Dichloroethene	<0.0047		0.0047	0.00096	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
cis-1,3-Dichloropropene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Dibromochloromethane	<0.0047		0.0047	0.00054	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1-Dichloroethane	<0.0047		0.0047	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,2-Dichloroethane	<0.0047		0.0047	0.00070	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1-Dichloroethene	<0.0047		0.0047	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,2-Dichloropropane	<0.0047	*	0.0047	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,3-Dichloropropene, Total	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Ethylbenzene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Methylene Chloride	<0.0047		0.0047	0.0036	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.00097	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Methyl tert-butyl ether	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Styrene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1,2,2-Tetrachloroethane	<0.0047		0.0047	0.00075	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Tetrachloroethene	<0.0047		0.0047	0.00098	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Toluene	<0.0047		0.0047	0.0016	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
trans-1,2-Dichloroethene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
trans-1,3-Dichloropropene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1,1-Trichloroethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
1,1,2-Trichloroethane	<0.0047		0.0047	0.00091	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Trichloroethene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Vinyl acetate	<0.0047		0.0047	0.0013	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Vinyl chloride	<0.0047		0.0047	0.0011	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1
Xylenes, Total	<0.0094		0.0094	0.0017	mg/Kg	☼	02/17/16 08:40	02/23/16 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 122*	*02/17/16 08:40*	*02/23/16 19:37*	*1*
Dibromofluoromethane	*94*		*75 - 120*	*02/17/16 08:40*	*02/23/16 19:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 134*	*02/17/16 08:40*	*02/23/16 19:37*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/17/16 08:40*	*02/23/16 19:37*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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	☼	02/18/16 18:29	02/29/16 00:18	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Methylnaphthalene	<0.037		0.037	0.0069	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Acenaphthylene	**0.0077**	**J**	0.037	0.0049	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Phenanthrene	**0.057**		0.037	0.0052	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Anthracene	**0.013**	**J**	0.037	0.0063	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Fluoranthene	**0.12**		0.037	0.0069	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Pyrene	**0.20**		0.037	0.0074	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[a]anthracene	**0.070**		0.037	0.0050	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.092**		0.037	0.010	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[b]fluoranthene	**0.16**		0.037	0.0081	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[k]fluoranthene	**0.059**		0.037	0.011	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[a]pyrene	**0.091**		0.037	0.0073	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Indeno[1,2,3-cd]pyrene	**0.052**		0.037	0.0097	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/18/16 18:29	02/29/16 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
Phenol-d5	*82*		*31 - 110*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
Nitrobenzene-d5	*61*		*25 - 115*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
2-Fluorobiphenyl	*69*		*25 - 119*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
2,4,6-Tribromophenol	*78*		*35 - 137*	*02/18/16 18:29*	*02/29/16 00:18*	*1*
Terphenyl-d14	*143*	*X*	*36 - 134*	*02/18/16 18:29*	*02/29/16 00:18*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.29**	**J**	0.90	0.19	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Arsenic	**3.7**		0.45	0.21	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Barium	**72**		0.45	0.082	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Beryllium	**0.27**		0.18	0.039	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Boron	**8.1**		2.2	0.31	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Cadmium	**0.22**		0.090	0.026	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Calcium	**150000**		90	29	mg/Kg	☼	02/24/16 09:03	02/26/16 00:28	10
Chromium	**9.0**	**B**	0.45	0.077	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Cobalt	**5.2**		0.22	0.051	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Copper	**11**		0.45	0.098	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Iron	**8600**	**B**	9.0	3.5	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Lead	**66**		0.22	0.11	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Magnesium	**87000**		45	18	mg/Kg	☼	02/24/16 09:03	02/26/16 00:28	10
Manganese	**440**	**B**	0.45	0.089	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Nickel	**9.8**	**B**	0.45	0.12	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Potassium	**640**		22	3.7	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Selenium	**0.53**		0.45	0.22	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Silver	<0.22		0.22	0.053	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Sodium	**1400**		45	5.9	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Thallium	<0.45		0.45	0.22	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Vanadium	**13**		0.22	0.066	mg/Kg	☼	02/24/16 09:03	02/26/16 13:48	1
Zinc	**390**		9.0	2.8	mg/Kg	☼	02/24/16 09:03	02/26/16 00:28	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.83**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:18	02/24/16 23:13	1
Boron	**0.50**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:13	1

Client Sample ID: 3011-37-B02 (0-1)
Date Collected: 02/16/16 15:00
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-22
Matrix: Solid
Percent Solids: 85.9

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		02/23/16 09:18	02/24/16 23:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Cobalt	**0.016**	**J**	0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:18	02/24/16 23:13	1
Lead	**0.0084**		0.0075	0.0075	mg/L		02/23/16 09:18	02/24/16 23:13	1
Manganese	**6.6**		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Nickel	**0.039**		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:18	02/24/16 23:13	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:13	1
Zinc	**3.1**		0.50	0.020	mg/L		02/23/16 09:18	02/24/16 23:13	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.22**		0.0075	0.0075	mg/L		02/23/16 09:23	02/25/16 06:33	1
Manganese	**1.3**		0.025	0.010	mg/L		02/23/16 09:23	02/25/16 06:33	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		02/23/16 09:18	02/23/16 18:13	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:18	02/23/16 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		02/22/16 15:15	02/23/16 11:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.19**		0.017	0.0089	mg/Kg	☼	02/23/16 15:15	02/24/16 10:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.52**		0.200	0.200	SU			02/20/16 13:28	1

Client Sample ID: 3011-37-B01 (0-1)
Date Collected: 02/16/16 15:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-23
Matrix: Solid
Percent Solids: 89.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0032	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Benzene	<0.0041		0.0041	0.00091	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Bromodichloromethane	<0.0041		0.0041	0.00069	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Bromoform	<0.0041		0.0041	0.00083	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Bromomethane	<0.0041	*	0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
2-Butanone (MEK)	<0.0041		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Carbon disulfide	<0.0041		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Carbon tetrachloride	<0.0041		0.0041	0.00087	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Chlorobenzene	<0.0041		0.0041	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Chloroethane	<0.0041		0.0041	0.0017	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Chloroform	<0.0041		0.0041	0.00080	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Chloromethane	<0.0041		0.0041	0.00098	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
cis-1,2-Dichloroethene	<0.0041		0.0041	0.00083	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
cis-1,3-Dichloropropene	<0.0041		0.0041	0.00093	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Dibromochloromethane	<0.0041		0.0041	0.00047	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,1-Dichloroethane	<0.0041		0.0041	0.00084	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,2-Dichloroethane	<0.0041		0.0041	0.00060	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,1-Dichloroethene	<0.0041		0.0041	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,2-Dichloropropane	<0.0041		0.0041	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,3-Dichloropropene, Total	<0.0041		0.0041	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Ethylbenzene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Methylene Chloride	<0.0041		0.0041	0.0031	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.00084	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Methyl tert-butyl ether	<0.0041		0.0041	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Styrene	<0.0041		0.0041	0.00096	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,1,2,2-Tetrachloroethane	<0.0041		0.0041	0.00065	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Tetrachloroethene	<0.0041		0.0041	0.00085	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Toluene	<0.0041		0.0041	0.0014	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
trans-1,2-Dichloroethene	<0.0041		0.0041	0.0010	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
trans-1,3-Dichloropropene	<0.0041		0.0041	0.0012	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,1,1-Trichloroethane	<0.0041		0.0041	0.00095	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
1,1,2-Trichloroethane	<0.0041		0.0041	0.00079	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Trichloroethene	<0.0041		0.0041	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Vinyl acetate	<0.0041		0.0041	0.0011	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Vinyl chloride	<0.0041		0.0041	0.00097	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1
Xylenes, Total	<0.0082		0.0082	0.0015	mg/Kg	☼	02/17/16 08:40	02/24/16 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 122*	*02/17/16 08:40*	*02/24/16 13:20*	*1*
Dibromofluoromethane	*91*		*75 - 120*	*02/17/16 08:40*	*02/24/16 13:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 134*	*02/17/16 08:40*	*02/24/16 13:20*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/17/16 08:40*	*02/24/16 13:20*	*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 18:29	02/29/16 12:23	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1

Client Sample ID: 3011-37-B01 (0-1)
Date Collected: 02/16/16 15:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-23
Matrix: Solid
Percent Solids: 89.7

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 18:29	02/29/16 12:23	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Nitrobenzene	<0.036		0.036	0.0089	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2-Nitrophenol	<0.36		0.36	0.084	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Phenanthrene	**0.011**	**J**	0.036	0.0050	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Anthracene	<0.036		0.036	0.0060	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Fluoranthene	**0.032**	**J**	0.036	0.0066	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Pyrene	**0.029**	**J**	0.036	0.0071	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Benzo[a]anthracene	**0.015**	**J**	0.036	0.0048	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1

Client Sample ID: 3011-37-B01 (0-1)
Date Collected: 02/16/16 15:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-23
Matrix: Solid
Percent Solids: 89.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.021**	**J**	0.036	0.0098	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Benzo[b]fluoranthene	**0.037**		0.036	0.0077	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Benzo[k]fluoranthene	**0.011**	**J**	0.036	0.011	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Benzo[a]pyrene	**0.021**	**J**	0.036	0.0069	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Indeno[1,2,3-cd]pyrene	<0.036		0.036	0.0093	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
Benzo[g,h,i]perylene	**0.013**	**J**	0.036	0.012	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/18/16 18:29	02/29/16 12:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*98*		*25 - 110*	*02/18/16 18:29*	*02/29/16 12:23*	*1*
Phenol-d5	*105*		*31 - 110*	*02/18/16 18:29*	*02/29/16 12:23*	*1*
Nitrobenzene-d5	*93*		*25 - 115*	*02/18/16 18:29*	*02/29/16 12:23*	*1*
2-Fluorobiphenyl	*88*		*25 - 119*	*02/18/16 18:29*	*02/29/16 12:23*	*1*
2,4,6-Tribromophenol	*96*		*35 - 137*	*02/18/16 18:29*	*02/29/16 12:23*	*1*
Terphenyl-d14	*116*		*36 - 134*	*02/18/16 18:29*	*02/29/16 12:23*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.22**	**J**	0.83	0.17	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Arsenic	**4.7**		0.41	0.19	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Barium	**59**		0.41	0.076	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Beryllium	**0.30**		0.17	0.036	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Boron	**6.0**		2.1	0.29	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Cadmium	**0.14**		0.083	0.024	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Calcium	**110000**		83	27	mg/Kg	☼	02/24/16 09:03	02/26/16 00:35	10
Chromium	**8.8**	**B**	0.41	0.071	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Cobalt	**6.5**		0.21	0.047	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Copper	**11**		0.41	0.090	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Iron	**10000**	**B**	8.3	3.2	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Lead	**20**		0.21	0.10	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Magnesium	**66000**		41	17	mg/Kg	☼	02/24/16 09:03	02/26/16 00:35	10
Manganese	**500**	**B**	0.41	0.082	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Nickel	**14**	**B**	0.41	0.11	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Potassium	**790**		21	3.4	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Selenium	**0.30**	**J**	0.41	0.21	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Silver	<0.21		0.21	0.048	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Sodium	**1200**		41	5.5	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Thallium	<0.41		0.41	0.20	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Vanadium	**15**		0.21	0.060	mg/Kg	☼	02/24/16 09:03	02/26/16 13:53	1
Zinc	**42**		8.3	2.6	mg/Kg	☼	02/24/16 09:03	02/26/16 00:35	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.60**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/23/16 09:18	02/24/16 23:20	1
Boron	**0.57**		0.50	0.050	mg/L		02/23/16 09:18	02/24/16 23:20	1

Client Sample ID: 3011-37-B01 (0-1)
Date Collected: 02/16/16 15:10
Date Received: 02/17/16 07:45

Lab Sample ID: 500-107642-23
Matrix: Solid
Percent Solids: 89.7

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		02/23/16 09:18	02/24/16 23:20	1
Chromium	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:20	1
Cobalt	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:20	1
Iron	<0.40		0.40	0.20	mg/L		02/23/16 09:18	02/24/16 23:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/23/16 09:18	02/24/16 23:20	1
Manganese	**3.2**		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:20	1
Nickel	**0.017**	**J**	0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:20	1
Selenium	<0.050		0.050	0.020	mg/L		02/23/16 09:18	02/24/16 23:20	1
Silver	<0.025		0.025	0.010	mg/L		02/23/16 09:18	02/24/16 23:20	1
Zinc	**0.22**	**J**	0.50	0.020	mg/L		02/23/16 09:18	02/24/16 23:20	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		02/23/16 09:23	02/25/16 06:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/23/16 09:18	02/23/16 18:17	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/23/16 09:18	02/23/16 18:17	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 11:07	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.054**		0.017	0.0087	mg/Kg	☼	02/23/16 15:15	02/24/16 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.47**		0.200	0.200	SU			02/20/16 13:32	1

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.
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: 500-107642-12

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

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

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

Chain of Custody Record

Lab Job #: 500-107642
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 109341.0008.01
Project Name: IL38
Project Location/State: Lake County, IL
Lab Project #: 500-118664
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOC	Parameter: SVOC	Parameter: Total TAL metals	Parameter: Target TAL metals	Parameter: pH/% Solids	Comments
22		3011-37-B02(0-1)	2/6/16	1500	2	S		X	X	X	X	X	
23		3011-37-B01(0-1)	2/6/16	1510	2	S		X	X	X	X	X	

2/6/16

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
1		EE	2/6/16	1530		TA	2/6/16	1530
2		TA	2/6/16	1715		TA-CHI	2/7/16	0745
3								

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: 500-107642-12

Login Number: 107642
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

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	2.8,2.5,3.2,3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 276 IL 38 ISGS #3011-38 (Fox Chase Farms)

City: Maple Park State: IL Zip Code: 60151

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: 41.89916 (Decimal Degrees) Longitude: -88.51457 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.89916 Longitude: -88.51457

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 3011-38-B01 through B06 were sampled within the construction zone adjacent to ISGS #3011-38 (Fox Chase Farms). Refer to PSI Report for ISGS #3011-38 (Fox Chase Farms) including Table 4-4, and Figures 4-6A&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 J107595-1.

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:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-38 (Fox Chase Farms)			Comparison Criteria			
BORING	3011-38-B01	3011-38-B02	3011-38-B03	MACs			TACO
SAMPLE	3011-38-B01 (0-1)	3011-38-B02 (0-1)	3011-38-B03 (0-1)				
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.46	8.51	8.36				
VOCs (mg/kg)							
Acetone	ND U	ND U	ND U	25	--	--	--
SVOCs (mg/kg)							
Acenaphthylene	ND U	ND U	**0.0051 J**	--	--	--	--
Anthracene	**0.0063 J**	**0.013 J**	**0.019 J**	12,000	--	--	--
Benzo[a]anthracene	**0.044**	**0.077**	**0.079**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.07**	**0.13** †	**0.1** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.12**	**0.23**	**0.18**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.052**	**0.11**	**0.06**	--	--	--	--
Benzo[k]fluoranthene	**0.056**	**0.094**	**0.07**	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	ND U	ND U	46	--	--	--
Chrysene	**0.067**	**0.13**	**0.11**	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	**0.013 J**	0.09	0.42	0.2	--
Fluoranthene	**0.07**	**0.12**	**0.19**	3,100	--	--	--
Fluorene	ND U	ND U	**0.0086 J**	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.056**	**0.11**	**0.059**	0.9	1.6	0.9	--
Phenanthrene	**0.041**	**0.068**	**0.095**	--	--	--	--
Pyrene	**0.15**	**0.25**	**0.2**	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	**0.34 J**	**0.55 J**	**0.44 J**	5	--	--	--
Arsenic	**2.2**	**2.6**	**2.4**	11.3	13	--	--
Barium	**26**	**24**	**29**	1,500	--	--	--
Beryllium	**0.17 J**	**0.16 J**	**0.2 J**	22	--	--	--
Boron	**8.6**	**8.8**	**8.2**	40	--	--	--
Cadmium	**0.064 J**	**0.14**	**0.097 J**	5.2	--	--	--
Calcium	**150,000**	**160,000**	**140,000**	--	--	--	--
Chromium	**31** †	**8.4**	**9.4**	21	--	--	--
Cobalt	**2.9**	**3**	**3.5**	20	--	--	--
Copper	**7.4**	**8.8**	**10**	2,900	--	--	--
Iron	**5,700**	**6,400**	**7,000**	15,000	15,900	--	--
Lead	**150** †	**52**	**42**	107	--	--	--
Magnesium	**90,000**	**99,000**	**85,000**	325,000	--	--	--
Manganese	**350**	**340**	**300**	630	636	--	--
Mercury	ND U	**0.011 J**	**0.014 J**	0.89	--	--	--
Nickel	**6.3**	**6.3**	**7.9**	100	--	--	--
Potassium	**540**	**510**	**530**	--	--	--	--
Selenium	ND U	ND U	ND U	1.3	--	--	--
Silver	ND U	ND U	**0.12 J**	4.4	--	--	--
Sodium	**810**	**790**	**1,000**	--	--	--	--
Vanadium	**8.3**	**9.9**	**11**	550	--	--	--
Zinc	**30**	**35**	**42**	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	**0.27 J**	**0.29 J**	**0.44 J**	--	--	--	2
Boron	**0.06 J**	**0.06 J**	**0.081 J**	--	--	--	2
Chromium	ND U	ND U	ND U	--	--	--	0.1
Cobalt	ND U	ND U	ND U	--	--	--	1
Lead	ND U	ND U	ND U	--	--	--	0.0075
Manganese	**1.2 L**	**1.1 L**	**1.2 L**	--	--	--	0.15
Nickel	ND U	ND U	ND U	--	--	--	0.1
Zinc	**0.059 J**	**0.13 J**	**0.054 J**	--	--	--	5
SPLP Metals (mg/L)							
Lead	NA	NA	NA	--	--	--	0.0075
Manganese	**0.085**	**0.24 L**	**0.48 L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-38 (Fox Chase Farms)			Comparison Criteria			
BORING	3011-38-B04	3011-38-B05	3011-38-B06	MACs			TACO
SAMPLE	3011-38-B04 (0-1)	3011-38-B05 (0-1)	3011-38-B06 (0-1)				
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.55	7.85	7.92				
VOCs (mg/kg)							
Acetone	ND U	**0.034**	ND U	25	--	--	--
SVOCs (mg/kg)							
Acenaphthylene	**0.0048 J**	ND U	ND U	--	--	--	--
Anthracene	**0.015 J**	**0.011 J**	**0.016 J**	12,000	--	--	--
Benzo[a]anthracene	**0.088**	**0.072**	**0.11**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.11** †	**0.084**	**0.18** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.2**	**0.16**	**0.23**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.066**	**0.05**	**0.21**	--	--	--	--
Benzo[k]fluoranthene	**0.091**	**0.065**	**0.086**	9	--	--	--
Bis(2-ethylhexyl) phthalate	ND U	ND U	**0.12 J**	46	--	--	--
Chrysene	**0.12**	**0.092**	**0.16**	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	**0.069**	0.09	0.42	0.2	--
Fluoranthene	**0.17**	**0.14**	**0.14**	3,100	--	--	--
Fluorene	ND U	ND U	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.049**	**0.042**	**0.19**	0.9	1.6	0.9	--
Phenanthrene	**0.073**	**0.056**	**0.075**	--	--	--	--
Pyrene	**0.25**	**0.17**	**0.39 J**	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	**0.41 J**	**0.47 J**	**0.45 J**	5	--	--	--
Arsenic	**5.3**	**3.9**	**3 J**	11.3	13	--	--
Barium	**64**	**58**	**37 J**	1,500	--	--	--
Beryllium	**0.38**	**0.31**	**0.13 J**	22	--	--	--
Boron	**4.2**	**6.1**	**8.2**	40	--	--	--
Cadmium	**0.069 J**	**0.18**	**0.11**	5.2	--	--	--
Calcium	**59,000**	**100,000**	**130,000**	--	--	--	--
Chromium	**10**	**11**	**7.6**	21	--	--	--
Cobalt	**7.4**	**5.3**	**3.8 J**	20	--	--	--
Copper	**15**	**11**	**11 J**	2,900	--	--	--
Iron	**11,000**	**8,400**	**6,900 J**	15,000	15,900	--	--
Lead	**31**	**70**	**69 J**	107	--	--	--
Magnesium	**28,000**	**41,000**	**74,000**	325,000	--	--	--
Manganese	**510**	**370**	**340 J**	630	636	--	--
Mercury	**0.03**	**0.019**	**0.015 J**	0.89	--	--	--
Nickel	**15**	**11**	**8.4**	100	--	--	--
Potassium	**690**	**630**	**530 J**	--	--	--	--
Selenium	**0.49 J**	ND U	**0.43 J**	1.3	--	--	--
Silver	ND U	ND U	ND U	4.4	--	--	--
Sodium	**1,500**	**1,300**	**1,300 J**	--	--	--	--
Vanadium	**17**	**15**	**12**	550	--	--	--
Zinc	**58**	**57**	**48**	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	**0.45 J**	**0.75**	**0.38 J**	--	--	--	2
Boron	**0.08 J**	**0.082 J**	**0.084 J**	--	--	--	2
Chromium	ND U	ND U	ND U	--	--	--	0.1
Cobalt	ND U	**0.02 J**	ND U	--	--	--	1
Lead	ND U	ND U	**0.0084 L**	--	--	--	0.0075
Manganese	**2.1 L**	**7.8 L**	**2 J L**	--	--	--	0.15
Nickel	**0.016 J**	**0.019 J**	**0.012 J**	--	--	--	0.1
Zinc	**0.15 J**	**0.11 J**	**0.079 J**	--	--	--	5
SPLP Metals (mg/L)							
Lead	NA	NA	**0.095 L**	--	--	--	0.0075
Manganese	**0.59 L**	**1 L**	**0.28 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: 500-107595-1
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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Table of Contents

Job ID: 500-107595-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107595-1

Comments
No additional comments.

Receipt
The samples were received on 2/16/2016 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 2.4º C, 2.7º C, 2.9º C, 3.0º C and 3.2º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323718 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for batch 500-323718 recovered outside control limits for the following analyte: Chloromethane. This analyte was biased high in the LCS 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 one base/neutral surrogate outside acceptance limits: 3011-38-B06 (0-1) (500-107595-1), 3011-38-B03 (0-1) (500-107595-4), 3011-38-B02 (0-1) (500-107595-5), 3011-38-B01 (0-1) (500-107595-6), , (500-107595-E-1-B MS) and (500-107595-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 500-323833 and analytical batch 500-324356 contained Chromium above the reporting limit (RL). Associated samples 3011-38-B06 (0-1) (500-107595-1), 3011-38-B05 (0-1) (500-107595-2), 3011-38-B04 (0-1) (500-107595-3), 3011-38-B03 (0-1) (500-107595-4), 3011-38-B02 (0-1) (500-107595-5), 3011-38-B01 (0-1) (500-107595-6), 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: 500-107595-1

Client Sample ID: 3011-38-B06 (0-1) — Lab Sample ID: 500-107595-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.075		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	0.14		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.39	F1	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	0.16		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.12	J F2 F1	0.19	0.068	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.23		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.086		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.19		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.069		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.21		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.45	J F1	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.0		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	37		0.53	0.097	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.13	J	0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	8.2		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.11		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	130000		110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	7.6	B	0.53	0.091	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.8		0.26	0.060	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	6900	F2	11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	69		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	74000		53	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	340	F2	0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.4		0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	530	F1	26	4.3	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.43	J F1	0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300	F1	53	7.0	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA
Zinc	48	F1 F2	11	3.4	mg/Kg	10	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.084	J	0.50	0.050	mg/L	1		6010B	TCLP
Lead	0.0084		0.0075	0.0075	mg/L	1		6010B	TCLP
Manganese	2.0	F1	0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.079	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.095		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.28		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.018	0.0092	mg/Kg	1	☼	7471B	Total/NA
pH	7.92		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-38-B05 (0-1) — Lab Sample ID: 500-107595-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.034		0.024	0.0047	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.056		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Client Sample ID: 3011-38-B05 (0-1) (Continued) — Lab Sample ID: 500-107595-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.14		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.17		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.072		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.092		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.065		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.084		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.042		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.050		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.47	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.9		0.54	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	58		0.54	0.099	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.31		0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	6.1		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.11	0.031	mg/Kg	1	☼	6010B	Total/NA
Calcium	100000		110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.54	0.093	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.3		0.27	0.061	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.54	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8400		11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	70		0.27	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	41000		5.4	2.2	mg/Kg	1	☼	6010B	Total/NA
Manganese	370		0.54	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	11		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	630		27	4.4	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		54	7.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.27	0.079	mg/Kg	1	☼	6010B	Total/NA
Zinc	57		11	3.4	mg/Kg	10	☼	6010B	Total/NA
Barium	0.75		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.082	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.020	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	7.8		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.019	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.11	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.019		0.017	0.0090	mg/Kg	1	☼	7471B	Total/NA
pH	7.85		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-38-B04 (0-1) — Lab Sample ID: 500-107595-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0048	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.073		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.17		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.25		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.088		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.12		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.091		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-38-B04 (0-1) (Continued) — Lab Sample ID: 500-107595-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.11		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.049		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.066		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.41	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.3		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	64		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.38		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	4.2		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.069	J	0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	59000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	10	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.4		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	15		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	31		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	28000		5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	510		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	690		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.49	J	0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.28	0.081	mg/Kg	1	☼	6010B	Total/NA
Zinc	58		11	3.5	mg/Kg	10	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	2.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.15	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.59		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.030		0.017	0.0090	mg/Kg	1	☼	7471B	Total/NA
pH	8.55		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-38-B03 (0-1) — Lab Sample ID: 500-107595-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0051	J	0.036	0.0047	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0086	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.095		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.019	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.19		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.20		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.079		0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.11		0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.18		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.070		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.059		0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.013	J	0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.060		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.44	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-38-B03 (0-1) (Continued)

Lab Sample ID: 500-107595-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.4		0.55	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	29		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.20	J	0.22	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	8.2		2.7	0.38	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.097	J	0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000		110	35	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.4	B	0.55	0.094	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.5		0.27	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	10		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7000		11	4.2	mg/Kg	1	☼	6010B	Total/NA
Lead	42		0.27	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	85000		55	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.9		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	530		27	4.5	mg/Kg	1	☼	6010B	Total/NA
Silver	0.12	J	0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Sodium	1000		55	7.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.27	0.080	mg/Kg	1	☼	6010B	Total/NA
Zinc	42		11	3.5	mg/Kg	10	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.081	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.054	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.48		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.014	J	0.019	0.0097	mg/Kg	1	☼	7471B	Total/NA
pH	8.36		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-38-B02 (0-1)

Lab Sample ID: 500-107595-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.068		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.12		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.25		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.077		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.23		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.094		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.13		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11		0.038	0.0099	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.11		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.55	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.6		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	24		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.16	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	160000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.4	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.0		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-38-B02 (0-1) (Continued)

Lab Sample ID: 500-107595-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	8.8		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	6400		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	52		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	99000		56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	340		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.3		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	510		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	790		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.9		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	35		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.29	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.060	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.13	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.24		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.011	J	0.018	0.0096	mg/Kg	1	☼	7471B	Total/NA
pH	8.51		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-38-B01 (0-1)

Lab Sample ID: 500-107595-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.041		0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0063	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.070		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.044		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.067		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.035	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.056		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.070		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.056		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.052		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.34	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.2		0.53	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	26		0.53	0.096	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.17	J	0.21	0.046	mg/Kg	1	☼	6010B	Total/NA
Boron	8.6		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.064	J	0.11	0.030	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000		110	34	mg/Kg	10	☼	6010B	Total/NA
Chromium	31	B	0.53	0.091	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.9		0.26	0.059	mg/Kg	1	☼	6010B	Total/NA
Copper	7.4		0.53	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	5700		11	4.1	mg/Kg	1	☼	6010B	Total/NA
Lead	150		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	90000		53	21	mg/Kg	10	☼	6010B	Total/NA
Manganese	350		0.53	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.3		0.53	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	540		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Sodium	810		53	6.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.3		0.26	0.077	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107595-1

Client Sample ID: 3011-38-B01 (0-1) (Continued)

Lab Sample ID: 500-107595-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	30		1.1	0.33	mg/Kg	1	☼	6010B	Total/NA
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.060	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.059	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.085		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.46		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107595-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107595-1	3011-38-B06 (0-1)	Solid	02/15/16 11:40	02/16/16 08:00
500-107595-2	3011-38-B05 (0-1)	Solid	02/15/16 11:45	02/16/16 08:00
500-107595-3	3011-38-B04 (0-1)	Solid	02/15/16 11:55	02/16/16 08:00
500-107595-4	3011-38-B03 (0-1)	Solid	02/15/16 12:00	02/16/16 08:00
500-107595-5	3011-38-B02 (0-1)	Solid	02/15/16 12:05	02/16/16 08:00
500-107595-6	3011-38-B01 (0-1)	Solid	02/15/16 12:10	02/16/16 08:00

Client Sample ID: 3011-38-B06 (0-1)
Date Collected: 02/15/16 11:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0036	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Carbon tetrachloride	<0.0046		0.0046	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Chloroform	<0.0046		0.0046	0.00090	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Chloromethane	<0.0046	*	0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,1-Dichloroethane	<0.0046		0.0046	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Tetrachloroethene	<0.0046		0.0046	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 122*	*02/16/16 08:50*	*02/20/16 18:32*	*1*
Dibromofluoromethane	*94*		*75 - 120*	*02/16/16 08:50*	*02/20/16 18:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 134*	*02/16/16 08:50*	*02/20/16 18:32*	*1*
Toluene-d8 (Surr)	*111*		*75 - 122*	*02/16/16 08:50*	*02/20/16 18:32*	*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	☼	02/19/16 07:12	02/26/16 19:34	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1

Client Sample ID: 3011-38-B06 (0-1)
Date Collected: 02/15/16 11:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Hexachloroethane	<0.19	F1	0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Hexachlorocyclopentadiene	<0.75	F1	0.75	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
3-Nitroaniline	<0.37	F2	0.37	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,4-Dinitrophenol	<0.75	F1	0.75	0.65	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4-Nitroaniline	<0.37	F2	0.37	0.16	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4-Bromophenyl phenyl ether	<0.19	F1	0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Hexachlorobenzene	<0.075	F1	0.075	0.0086	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Pentachlorophenol	<0.75	F2	0.75	0.60	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
N-Nitrosodiphenylamine	<0.19	F1	0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Phenanthrene	**0.075**		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Anthracene	**0.016**	**J**	0.037	0.0062	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Fluoranthene	**0.14**		0.037	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Pyrene	**0.39**	**F1**	0.037	0.0074	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Butyl benzyl phthalate	<0.19	F1	0.19	0.071	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Benzo[a]anthracene	**0.11**		0.037	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1

Client Sample ID: 3011-38-B06 (0-1)
Date Collected: 02/15/16 11:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-1
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.16**		0.037	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
3,3'-Dichlorobenzidine	<0.19	F1	0.19	0.052	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Bis(2-ethylhexyl) phthalate	**0.12**	**J F2 F1**	0.19	0.068	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Di-n-octyl phthalate	<0.19	F1	0.19	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Benzo[b]fluoranthene	**0.23**		0.037	0.0080	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Benzo[k]fluoranthene	**0.086**		0.037	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Benzo[a]pyrene	**0.18**		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Indeno[1,2,3-cd]pyrene	**0.19**		0.037	0.0096	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Dibenz(a,h)anthracene	**0.069**		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
Benzo[g,h,i]perylene	**0.21**		0.037	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*97*		*25 - 110*	*02/19/16 07:12*	*02/26/16 19:34*	*1*
Phenol-d5	*97*		*31 - 110*	*02/19/16 07:12*	*02/26/16 19:34*	*1*
Nitrobenzene-d5	*85*		*25 - 115*	*02/19/16 07:12*	*02/26/16 19:34*	*1*
2-Fluorobiphenyl	*97*		*25 - 119*	*02/19/16 07:12*	*02/26/16 19:34*	*1*
2,4,6-Tribromophenol	*95*		*35 - 137*	*02/19/16 07:12*	*02/26/16 19:34*	*1*
Terphenyl-d14	*238*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 19:34*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.45**	**J F1**	1.1	0.22	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Arsenic	**3.0**		0.53	0.24	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Barium	**37**		0.53	0.097	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Beryllium	**0.13**	**J**	0.21	0.046	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Boron	**8.2**		2.6	0.37	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Cadmium	**0.11**		0.11	0.031	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Calcium	**130000**		110	34	mg/Kg	☼	02/21/16 17:45	02/25/16 13:03	10
Chromium	**7.6**	**B**	0.53	0.091	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Cobalt	**3.8**		0.26	0.060	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Copper	**11**		0.53	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Iron	**6900**	**F2**	11	4.1	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Lead	**69**		0.26	0.13	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Magnesium	**74000**		53	22	mg/Kg	☼	02/21/16 17:45	02/25/16 13:03	10
Manganese	**340**	**F2**	0.53	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Nickel	**8.4**		0.53	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Potassium	**530**	**F1**	26	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Selenium	**0.43**	**J F1**	0.53	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Sodium	**1300**	**F1**	53	7.0	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Vanadium	**12**		0.26	0.077	mg/Kg	☼	02/21/16 17:45	02/24/16 20:18	1
Zinc	**48**	**F1 F2**	11	3.4	mg/Kg	☼	02/21/16 17:45	02/25/16 13:03	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		02/22/16 09:43	02/23/16 02:09	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 02:09	1
Boron	**0.084**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:09	1

Client Sample ID: 3011-38-B06 (0-1)
Date Collected: 02/15/16 11:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-1
Matrix: Solid
Percent Solids: 87.5

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		02/22/16 09:43	02/23/16 02:09	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:09	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:09	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 02:09	1
Lead	**0.0084**		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 02:09	1
Manganese	**2.0**	**F1**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:09	1
Nickel	**0.012**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:09	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 02:09	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:09	1
Zinc	**0.079**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 02:09	1

Method: 6010B - SPLP Metals - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.095**		0.0075	0.0075	mg/L		02/22/16 09:48	02/23/16 23:35	1
Manganese	**0.28**		0.025	0.010	mg/L		02/22/16 09:48	02/23/16 23:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/22/16 09:43	02/23/16 12:56	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 12:56	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		02/22/16 15:15	02/23/16 11:57	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.015**	**J**	0.018	0.0092	mg/Kg	☼	02/19/16 16:00	02/22/16 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.92**		0.200	0.200	SU			02/18/16 18:54	1

Client Sample ID: 3011-38-B05 (0-1)
Date Collected: 02/15/16 11:45
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-2
Matrix: Solid
Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.034**		0.024	0.0047	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Benzene	<0.0060		0.0060	0.0013	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Bromodichloromethane	<0.0060		0.0060	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Bromoform	<0.0060		0.0060	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Bromomethane	<0.0060		0.0060	0.0022	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
2-Butanone (MEK)	<0.0060		0.0060	0.0021	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Carbon disulfide	<0.0060		0.0060	0.0022	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Carbon tetrachloride	<0.0060		0.0060	0.0013	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Chlorobenzene	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Chloroethane	<0.0060		0.0060	0.0025	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Chloroform	<0.0060		0.0060	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Chloromethane	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
cis-1,2-Dichloroethene	<0.0060		0.0060	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
cis-1,3-Dichloropropene	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Dibromochloromethane	<0.0060		0.0060	0.00069	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,1-Dichloroethane	<0.0060		0.0060	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,2-Dichloroethane	<0.0060		0.0060	0.00089	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,1-Dichloroethene	<0.0060		0.0060	0.0022	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,2-Dichloropropane	<0.0060		0.0060	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,3-Dichloropropene, Total	<0.0060		0.0060	0.0017	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Ethylbenzene	<0.0060		0.0060	0.0015	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
2-Hexanone	<0.0060		0.0060	0.0019	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Methylene Chloride	<0.0060		0.0060	0.0045	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
4-Methyl-2-pentanone (MIBK)	<0.0060		0.0060	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Methyl tert-butyl ether	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Styrene	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,1,2,2-Tetrachloroethane	<0.0060		0.0060	0.00095	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Tetrachloroethene	<0.0060		0.0060	0.0013	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Toluene	<0.0060		0.0060	0.0021	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
trans-1,2-Dichloroethene	<0.0060		0.0060	0.0015	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
trans-1,3-Dichloropropene	<0.0060		0.0060	0.0017	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,1,1-Trichloroethane	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
1,1,2-Trichloroethane	<0.0060		0.0060	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Trichloroethene	<0.0060		0.0060	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Vinyl acetate	<0.0060		0.0060	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Vinyl chloride	<0.0060		0.0060	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1
Xylenes, Total	<0.012		0.012	0.0022	mg/Kg	☼	02/16/16 08:50	02/22/16 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 122*	*02/16/16 08:50*	*02/22/16 13:11*	*1*
Dibromofluoromethane	*90*		*75 - 120*	*02/16/16 08:50*	*02/22/16 13:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 134*	*02/16/16 08:50*	*02/22/16 13:11*	*1*
Toluene-d8 (Surr)	*105*		*75 - 122*	*02/16/16 08:50*	*02/22/16 13:11*	*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	☼	02/19/16 07:12	02/27/16 11:38	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.055	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
1,4-Dichlorobenzene	<0.19		0.19	0.047	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1

Client Sample ID: 3011-38-B05 (0-1)
Date Collected: 02/15/16 11:45
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-2
Matrix: Solid
Percent Solids: 87.7

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	☼	02/19/16 07:12	02/27/16 11:38	1
2-Methylphenol	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Pentachlorophenol	<0.75		0.75	0.59	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Phenanthrene	**0.056**		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Anthracene	**0.011**	**J**	0.037	0.0062	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Carbazole	<0.19		0.19	0.092	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Fluoranthene	**0.14**		0.037	0.0069	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Pyrene	**0.17**		0.037	0.0074	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Butyl benzyl phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Benzo[a]anthracene	**0.072**		0.037	0.0050	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1

Client Sample ID: 3011-38-B05 (0-1)
Date Collected: 02/15/16 11:45
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-2
Matrix: Solid
Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.092**		0.037	0.010	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Di-n-octyl phthalate	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Benzo[b]fluoranthene	**0.16**		0.037	0.0080	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Benzo[k]fluoranthene	**0.065**		0.037	0.011	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Benzo[a]pyrene	**0.084**		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Indeno[1,2,3-cd]pyrene	**0.042**		0.037	0.0096	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
Benzo[g,h,i]perylene	**0.050**		0.037	0.012	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/27/16 11:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*86*		*25 - 110*	*02/19/16 07:12*	*02/27/16 11:38*	*1*
Phenol-d5	*88*		*31 - 110*	*02/19/16 07:12*	*02/27/16 11:38*	*1*
Nitrobenzene-d5	*79*		*25 - 115*	*02/19/16 07:12*	*02/27/16 11:38*	*1*
2-Fluorobiphenyl	*82*		*25 - 119*	*02/19/16 07:12*	*02/27/16 11:38*	*1*
2,4,6-Tribromophenol	*63*		*35 - 137*	*02/19/16 07:12*	*02/27/16 11:38*	*1*
Terphenyl-d14	*128*		*36 - 134*	*02/19/16 07:12*	*02/27/16 11:38*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.47**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Arsenic	**3.9**		0.54	0.25	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Barium	**58**		0.54	0.099	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Beryllium	**0.31**		0.22	0.047	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Boron	**6.1**		2.7	0.38	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Cadmium	**0.18**		0.11	0.031	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Calcium	**100000**		110	35	mg/Kg	☼	02/21/16 17:45	02/25/16 13:24	10
Chromium	**11**	**B**	0.54	0.093	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Cobalt	**5.3**		0.27	0.061	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Copper	**11**		0.54	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Iron	**8400**		11	4.2	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Lead	**70**		0.27	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Magnesium	**41000**		5.4	2.2	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Manganese	**370**		0.54	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Nickel	**11**		0.54	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Potassium	**630**		27	4.4	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Selenium	<0.54		0.54	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Silver	<0.27		0.27	0.064	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Sodium	**1300**		54	7.2	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Vanadium	**15**		0.27	0.079	mg/Kg	☼	02/21/16 17:45	02/24/16 20:44	1
Zinc	**57**		11	3.4	mg/Kg	☼	02/21/16 17:45	02/25/16 13:24	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.75**		0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:36	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 02:36	1
Boron	**0.082**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:36	1

Client Sample ID: 3011-38-B05 (0-1)
Date Collected: 02/15/16 11:45
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-2
Matrix: Solid
Percent Solids: 87.7

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		02/22/16 09:43	02/23/16 02:36	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:36	1
Cobalt	**0.020**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:36	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 02:36	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 02:36	1
Manganese	**7.8**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:36	1
Nickel	**0.019**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:36	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 02:36	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:36	1
Zinc	**0.11**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 02:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1.0**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 00:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/22/16 09:43	02/23/16 13:12	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:12	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		02/22/16 15:15	02/23/16 11:59	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.019**		0.017	0.0090	mg/Kg	☼	02/19/16 16:00	02/22/16 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.85**		0.200	0.200	SU			02/18/16 19:00	1

Client Sample ID: 3011-38-B04 (0-1)
Date Collected: 02/15/16 11:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-3
Matrix: Solid
Percent Solids: 87.3

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	☼	02/16/16 08:50	02/20/16 19:22	1
Benzene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Bromodichloromethane	<0.0051		0.0051	0.00086	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Bromoform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Bromomethane	<0.0051		0.0051	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
2-Butanone (MEK)	<0.0051		0.0051	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Carbon disulfide	<0.0051		0.0051	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Carbon tetrachloride	<0.0051		0.0051	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Chlorobenzene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Chloroethane	<0.0051		0.0051	0.0021	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Chloroform	<0.0051		0.0051	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Chloromethane	<0.0051	*	0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
cis-1,2-Dichloroethene	<0.0051		0.0051	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
cis-1,3-Dichloropropene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Dibromochloromethane	<0.0051		0.0051	0.00059	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,1-Dichloroethane	<0.0051		0.0051	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,2-Dichloroethane	<0.0051		0.0051	0.00076	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,1-Dichloroethene	<0.0051		0.0051	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,2-Dichloropropane	<0.0051		0.0051	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,3-Dichloropropene, Total	<0.0051		0.0051	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Ethylbenzene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Methylene Chloride	<0.0051		0.0051	0.0039	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Methyl tert-butyl ether	<0.0051		0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Styrene	<0.0051		0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,1,2,2-Tetrachloroethane	<0.0051		0.0051	0.00081	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Tetrachloroethene	<0.0051		0.0051	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Toluene	<0.0051		0.0051	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
trans-1,2-Dichloroethene	<0.0051		0.0051	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
trans-1,3-Dichloropropene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,1,1-Trichloroethane	<0.0051		0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
1,1,2-Trichloroethane	<0.0051		0.0051	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Trichloroethene	<0.0051		0.0051	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Vinyl acetate	<0.0051		0.0051	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Vinyl chloride	<0.0051		0.0051	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1
Xylenes, Total	<0.010		0.010	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 122*	*02/16/16 08:50*	*02/20/16 19:22*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/16/16 08:50*	*02/20/16 19:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 134*	*02/16/16 08:50*	*02/20/16 19:22*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/16/16 08:50*	*02/20/16 19:22*	*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	☼	02/19/16 07:12	02/27/16 12:04	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1

Client Sample ID: 3011-38-B04 (0-1)
Date Collected: 02/15/16 11:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-3
Matrix: Solid
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	<0.18		0.18	0.044	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Acenaphthylene	**0.0048**	**J**	0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Phenanthrene	**0.073**		0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Anthracene	**0.015**	**J**	0.036	0.0061	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Fluoranthene	**0.17**		0.036	0.0068	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Pyrene	**0.25**		0.036	0.0072	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Benzo[a]anthracene	**0.088**		0.036	0.0049	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1

Client Sample ID: 3011-38-B04 (0-1)
Date Collected: 02/15/16 11:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-3
Matrix: Solid
Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.12**		0.036	0.010	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Benzo[b]fluoranthene	**0.20**		0.036	0.0079	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Benzo[k]fluoranthene	**0.091**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Benzo[a]pyrene	**0.11**		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Indeno[1,2,3-cd]pyrene	**0.049**		0.036	0.0095	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
Benzo[g,h,i]perylene	**0.066**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/27/16 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*76*		*25 - 110*	*02/19/16 07:12*	*02/27/16 12:04*	*1*
Phenol-d5	*75*		*31 - 110*	*02/19/16 07:12*	*02/27/16 12:04*	*1*
Nitrobenzene-d5	*69*		*25 - 115*	*02/19/16 07:12*	*02/27/16 12:04*	*1*
2-Fluorobiphenyl	*72*		*25 - 119*	*02/19/16 07:12*	*02/27/16 12:04*	*1*
2,4,6-Tribromophenol	*51*		*35 - 137*	*02/19/16 07:12*	*02/27/16 12:04*	*1*
Terphenyl-d14	*125*		*36 - 134*	*02/19/16 07:12*	*02/27/16 12:04*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.41**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Arsenic	**5.3**		0.56	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Barium	**64**		0.56	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Beryllium	**0.38**		0.22	0.048	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Boron	**4.2**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Cadmium	**0.069**	**J**	0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Calcium	**59000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 13:28	10
Chromium	**10**	**B**	0.56	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Cobalt	**7.4**		0.28	0.063	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Copper	**15**		0.56	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Iron	**11000**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Lead	**31**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Magnesium	**28000**		5.6	2.3	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Manganese	**510**		0.56	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Nickel	**15**		0.56	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Potassium	**690**		28	4.5	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Selenium	**0.49**	**J**	0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Sodium	**1500**		56	7.4	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Thallium	<0.56		0.56	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Vanadium	**17**		0.28	0.081	mg/Kg	☼	02/21/16 17:45	02/24/16 20:49	1
Zinc	**58**		11	3.5	mg/Kg	☼	02/21/16 17:45	02/25/16 13:28	10

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		02/22/16 09:43	02/23/16 02:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 02:43	1
Boron	**0.080**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:43	1

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

TestAmerica Job ID: 500-107595-1

Client Sample ID: 3011-38-B04 (0-1)
Date Collected: 02/15/16 11:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-3
Matrix: Solid
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		02/22/16 09:43	02/23/16 02:43	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:43	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:43	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 02:43	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 02:43	1
Manganese	**2.1**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:43	1
Nickel	**0.016**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:43	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 02:43	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:43	1
Zinc	**0.15**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 02:43	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		02/22/16 09:48	02/24/16 00:09	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		02/22/16 09:43	02/23/16 13:17	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:17	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:08	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.030**		0.017	0.0090	mg/Kg	☼	02/19/16 16:00	02/22/16 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.55**		0.200	0.200	SU			02/18/16 19:13	1

Client Sample ID: 3011-38-B03 (0-1)
Date Collected: 02/15/16 12:00
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-4
Matrix: Solid
Percent Solids: 87.8

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	☼	02/16/16 08:50	02/20/16 19:47	1
Benzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Bromodichloromethane	<0.0049		0.0049	0.00083	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Bromoform	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Bromomethane	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
2-Butanone (MEK)	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Carbon disulfide	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Carbon tetrachloride	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Chlorobenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Chloroethane	<0.0049		0.0049	0.0021	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Chloroform	<0.0049		0.0049	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Chloromethane	<0.0049	*	0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
cis-1,2-Dichloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
cis-1,3-Dichloropropene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Dibromochloromethane	<0.0049		0.0049	0.00057	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,1-Dichloroethane	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,2-Dichloroethane	<0.0049		0.0049	0.00073	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,1-Dichloroethene	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,2-Dichloropropane	<0.0049		0.0049	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,3-Dichloropropene, Total	<0.0049		0.0049	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Ethylbenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Methylene Chloride	<0.0049		0.0049	0.0037	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Methyl tert-butyl ether	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Styrene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,1,2,2-Tetrachloroethane	<0.0049		0.0049	0.00078	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Tetrachloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Toluene	<0.0049		0.0049	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
trans-1,2-Dichloroethene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
trans-1,3-Dichloropropene	<0.0049		0.0049	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,1,1-Trichloroethane	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
1,1,2-Trichloroethane	<0.0049		0.0049	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Trichloroethene	<0.0049		0.0049	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Vinyl acetate	<0.0049		0.0049	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Vinyl chloride	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1
Xylenes, Total	<0.0098		0.0098	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/16/16 08:50*	*02/20/16 19:47*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/16/16 08:50*	*02/20/16 19:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 134*	*02/16/16 08:50*	*02/20/16 19:47*	*1*
Toluene-d8 (Surr)	*105*		*75 - 122*	*02/16/16 08:50*	*02/20/16 19:47*	*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	☼	02/19/16 07:12	02/26/16 12:01	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1

Client Sample ID: 3011-38-B03 (0-1)
Date Collected: 02/15/16 12:00
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-4
Matrix: Solid
Percent Solids: 87.8

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	☼	02/19/16 07:12	02/26/16 12:01	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2-Methylnaphthalene	<0.036		0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,4-Dinitrophenol	<0.73		0.73	0.63	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Acenaphthylene	**0.0051**	**J**	0.036	0.0047	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Fluorene	**0.0086**	**J**	0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Hexachlorobenzene	<0.073		0.073	0.0083	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Phenanthrene	**0.095**		0.036	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Anthracene	**0.019**	**J**	0.036	0.0060	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Fluoranthene	**0.19**		0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Pyrene	**0.20**		0.036	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Benzo[a]anthracene	**0.079**		0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1

Client Sample ID: 3011-38-B03 (0-1)
Date Collected: 02/15/16 12:00
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-4
Matrix: Solid
Percent Solids: 87.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.11**		0.036	0.0098	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Benzo[b]fluoranthene	**0.18**		0.036	0.0078	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Benzo[k]fluoranthene	**0.070**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Benzo[a]pyrene	**0.10**		0.036	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Indeno[1,2,3-cd]pyrene	**0.059**		0.036	0.0093	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Dibenz(a,h)anthracene	**0.013**	**J**	0.036	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
Benzo[g,h,i]perylene	**0.060**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 12:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*88*		*25 - 110*	*02/19/16 07:12*	*02/26/16 12:01*	*1*
Phenol-d5	*82*		*31 - 110*	*02/19/16 07:12*	*02/26/16 12:01*	*1*
Nitrobenzene-d5	*75*		*25 - 115*	*02/19/16 07:12*	*02/26/16 12:01*	*1*
2-Fluorobiphenyl	*79*		*25 - 119*	*02/19/16 07:12*	*02/26/16 12:01*	*1*
2,4,6-Tribromophenol	*97*		*35 - 137*	*02/19/16 07:12*	*02/26/16 12:01*	*1*
Terphenyl-d14	*138*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 12:01*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.44**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Arsenic	**2.4**		0.55	0.25	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Barium	**29**		0.55	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Beryllium	**0.20**	**J**	0.22	0.047	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Boron	**8.2**		2.7	0.38	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Cadmium	**0.097**	**J**	0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Calcium	**140000**		110	35	mg/Kg	☼	02/21/16 17:45	02/25/16 13:40	10
Chromium	**9.4**	**B**	0.55	0.094	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Cobalt	**3.5**		0.27	0.062	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Copper	**10**		0.55	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Iron	**7000**		11	4.2	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Lead	**42**		0.27	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Magnesium	**85000**		55	22	mg/Kg	☼	02/21/16 17:45	02/25/16 13:40	10
Manganese	**300**		0.55	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Nickel	**7.9**		0.55	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Potassium	**530**		27	4.5	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Selenium	<0.55		0.55	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Silver	**0.12**	**J**	0.27	0.064	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Sodium	**1000**		55	7.2	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Vanadium	**11**		0.27	0.080	mg/Kg	☼	02/21/16 17:45	02/24/16 20:54	1
Zinc	**42**		11	3.5	mg/Kg	☼	02/21/16 17:45	02/25/16 13:40	10

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		02/22/16 09:43	02/23/16 02:50	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 02:50	1
Boron	**0.081**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:50	1

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

TestAmerica Job ID: 500-107595-1

Client Sample ID: 3011-38-B03 (0-1)
Date Collected: 02/15/16 12:00
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-4
Matrix: Solid
Percent Solids: 87.8

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		02/22/16 09:43	02/23/16 02:50	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:50	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:50	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 02:50	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 02:50	1
Manganese	**1.2**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:50	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:50	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 02:50	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:50	1
Zinc	**0.054**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 02:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.48**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 00:16	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		02/22/16 09:43	02/23/16 13:21	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:21	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		02/22/16 15:15	02/23/16 12:10	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.014**	**J**	0.019	0.0097	mg/Kg	☼	02/19/16 16:00	02/22/16 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.36**		0.200	0.200	SU			02/18/16 19:19	1

Client Sample ID: 3011-38-B02 (0-1)
Date Collected: 02/15/16 12:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-5
Matrix: Solid
Percent Solids: 85.8

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	☼	02/16/16 08:50	02/20/16 20:11	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Bromoform	<0.0046		0.0046	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
2-Butanone (MEK)	<0.0046		0.0046	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Carbon tetrachloride	<0.0046		0.0046	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Chloroform	<0.0046		0.0046	0.00090	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Chloromethane	<0.0046	*	0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,1-Dichloroethane	<0.0046		0.0046	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,2-Dichloroethane	<0.0046		0.0046	0.00068	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Ethylbenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00073	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Tetrachloroethene	<0.0046		0.0046	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00089	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Trichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1
Xylenes, Total	<0.0092		0.0092	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/16/16 08:50*	*02/20/16 20:11*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/16/16 08:50*	*02/20/16 20:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/16/16 08:50*	*02/20/16 20:11*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/16/16 08:50*	*02/20/16 20:11*	*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	☼	02/19/16 07:12	02/26/16 13:54	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1

Client Sample ID: 3011-38-B02 (0-1)
Date Collected: 02/15/16 12:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-5
Matrix: Solid
Percent Solids: 85.8

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	☼	02/19/16 07:12	02/26/16 13:54	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Phenanthrene	**0.068**		0.038	0.0053	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Anthracene	**0.013**	**J**	0.038	0.0064	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Fluoranthene	**0.12**		0.038	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Pyrene	**0.25**		0.038	0.0076	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Benzo[a]anthracene	**0.077**		0.038	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1

Client Sample ID: 3011-38-B02 (0-1)
Date Collected: 02/15/16 12:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-5
Matrix: Solid
Percent Solids: 85.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.13**		0.038	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Benzo[b]fluoranthene	**0.23**		0.038	0.0082	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Benzo[k]fluoranthene	**0.094**		0.038	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Benzo[a]pyrene	**0.13**		0.038	0.0074	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Indeno[1,2,3-cd]pyrene	**0.11**		0.038	0.0099	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
Benzo[g,h,i]perylene	**0.11**		0.038	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/19/16 07:12	02/26/16 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*88*		*25 - 110*	*02/19/16 07:12*	*02/26/16 13:54*	*1*
Phenol-d5	*86*		*31 - 110*	*02/19/16 07:12*	*02/26/16 13:54*	*1*
Nitrobenzene-d5	*75*		*25 - 115*	*02/19/16 07:12*	*02/26/16 13:54*	*1*
2-Fluorobiphenyl	*80*		*25 - 119*	*02/19/16 07:12*	*02/26/16 13:54*	*1*
2,4,6-Tribromophenol	*97*		*35 - 137*	*02/19/16 07:12*	*02/26/16 13:54*	*1*
Terphenyl-d14	*204*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 13:54*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.55**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Arsenic	**2.6**		0.56	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Barium	**24**		0.56	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Beryllium	**0.16**	**J**	0.22	0.048	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Boron	**8.8**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Cadmium	**0.14**		0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Calcium	**160000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 13:44	10
Chromium	**8.4**	**B**	0.56	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Cobalt	**3.0**		0.28	0.063	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Copper	**8.8**		0.56	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Iron	**6400**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Lead	**52**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Magnesium	**99000**		56	23	mg/Kg	☼	02/21/16 17:45	02/25/16 13:44	10
Manganese	**340**		0.56	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Nickel	**6.3**		0.56	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Potassium	**510**		28	4.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Sodium	**790**		56	7.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Vanadium	**9.9**		0.28	0.082	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1
Zinc	**35**		1.1	0.35	mg/Kg	☼	02/21/16 17:45	02/24/16 21:07	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.29**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 02:56	1
Boron	**0.060**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 02:56	1

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

TestAmerica Job ID: 500-107595-1

Client Sample ID: 3011-38-B02 (0-1)
Date Collected: 02/15/16 12:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-5
Matrix: Solid
Percent Solids: 85.8

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		02/22/16 09:43	02/23/16 02:56	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:56	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:56	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 02:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 02:56	1
Manganese	**1.1**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:56	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:56	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 02:56	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 02:56	1
Zinc	**0.13**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 02:56	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		02/22/16 09:48	02/24/16 00:22	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		02/22/16 09:43	02/23/16 13:25	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:25	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		02/22/16 15:15	02/23/16 12:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.011**	**J**	0.018	0.0096	mg/Kg	☼	02/19/16 16:00	02/22/16 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.51**		0.200	0.200	SU			02/18/16 19:25	1

Client Sample ID: 3011-38-B01 (0-1)
Date Collected: 02/15/16 12:10
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-6
Matrix: Solid
Percent Solids: 89.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Bromodichloromethane	<0.0048		0.0048	0.00082	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Bromoform	<0.0048		0.0048	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Chloroform	<0.0048		0.0048	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Chloromethane	<0.0048	*	0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Dibromochloromethane	<0.0048		0.0048	0.00056	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,1-Dichloroethane	<0.0048		0.0048	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,2-Dichloroethane	<0.0048		0.0048	0.00072	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,1-Dichloroethene	<0.0048		0.0048	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,2-Dichloropropane	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Methylene Chloride	<0.0048		0.0048	0.0037	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00077	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Tetrachloroethene	<0.0048		0.0048	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Vinyl chloride	<0.0048		0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1
Xylenes, Total	<0.0097		0.0097	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 122*	*02/16/16 08:50*	*02/20/16 20:36*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/16/16 08:50*	*02/20/16 20:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/16/16 08:50*	*02/20/16 20:36*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/16/16 08:50*	*02/20/16 20:36*	*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	☼	02/19/16 07:12	02/26/16 14:22	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1

Client Sample ID: 3011-38-B01 (0-1)
Date Collected: 02/15/16 12:10
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-6
Matrix: Solid
Percent Solids: 89.4

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	☼	02/19/16 07:12	02/26/16 14:22	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Nitrobenzene	<0.035		0.035	0.0088	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4-Chloroaniline	<0.71		0.71	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Acenaphthene	<0.035		0.035	0.0064	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4-Nitrophenol	<0.71		0.71	0.34	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Hexachlorobenzene	<0.071		0.071	0.0082	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Pentachlorophenol	<0.71		0.71	0.57	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Phenanthrene	**0.041**		0.035	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Anthracene	**0.0063**	**J**	0.035	0.0059	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Fluoranthene	**0.070**		0.035	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Pyrene	**0.15**		0.035	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Benzo[a]anthracene	**0.044**		0.035	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1

Client Sample ID: 3011-38-B01 (0-1)
Date Collected: 02/15/16 12:10
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-6
Matrix: Solid
Percent Solids: 89.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.067**		0.035	0.0097	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Benzo[b]fluoranthene	**0.12**		0.035	0.0076	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Benzo[k]fluoranthene	**0.056**		0.035	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Benzo[a]pyrene	**0.070**		0.035	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Indeno[1,2,3-cd]pyrene	**0.056**		0.035	0.0092	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
Benzo[g,h,i]perylene	**0.052**		0.035	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*83*		*25 - 110*	*02/19/16 07:12*	*02/26/16 14:22*	*1*
Phenol-d5	*83*		*31 - 110*	*02/19/16 07:12*	*02/26/16 14:22*	*1*
Nitrobenzene-d5	*74*		*25 - 115*	*02/19/16 07:12*	*02/26/16 14:22*	*1*
2-Fluorobiphenyl	*77*		*25 - 119*	*02/19/16 07:12*	*02/26/16 14:22*	*1*
2,4,6-Tribromophenol	*94*		*35 - 137*	*02/19/16 07:12*	*02/26/16 14:22*	*1*
Terphenyl-d14	*204*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 14:22*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.34**	**J**	1.1	0.22	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Arsenic	**2.2**		0.53	0.24	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Barium	**26**		0.53	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Beryllium	**0.17**	**J**	0.21	0.046	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Boron	**8.6**		2.6	0.37	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Cadmium	**0.064**	**J**	0.11	0.030	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Calcium	**150000**		110	34	mg/Kg	☼	02/21/16 17:45	02/25/16 13:49	10
Chromium	**31**	**B**	0.53	0.091	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Cobalt	**2.9**		0.26	0.059	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Copper	**7.4**		0.53	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Iron	**5700**		11	4.1	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Lead	**150**		0.26	0.13	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Magnesium	**90000**		53	21	mg/Kg	☼	02/21/16 17:45	02/25/16 13:49	10
Manganese	**350**		0.53	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Nickel	**6.3**		0.53	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Potassium	**540**		26	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Selenium	<0.53		0.53	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Silver	<0.26		0.26	0.062	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Sodium	**810**		53	6.9	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Thallium	<0.53		0.53	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Vanadium	**8.3**		0.26	0.077	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	1
Zinc	**30**		1.1	0.33	mg/Kg	☼	02/21/16 17:45	02/24/16 21:12	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		02/22/16 09:43	02/23/16 03:19	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 03:19	1
Boron	**0.060**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:19	1

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

TestAmerica Job ID: 500-107595-1

Client Sample ID: 3011-38-B01 (0-1)
Date Collected: 02/15/16 12:10
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-6
Matrix: Solid
Percent Solids: 89.4

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		02/22/16 09:43	02/23/16 03:19	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:19	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:19	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 03:19	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 03:19	1
Manganese	**1.2**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:19	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:19	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 03:19	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:19	1
Zinc	**0.059**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 03:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.085**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 00:45	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		02/22/16 09:43	02/23/16 13:37	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:37	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:14	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0087	mg/Kg	☼	02/19/16 16:00	02/22/16 13:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.46**		0.200	0.200	SU			02/18/16 19:32	1

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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
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.
¤	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: 500-107595-1

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

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500-107595 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 #: 500-107595

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler: 2.9, 2.7, 3.0, 2.4, 3.2

Client: EC
Client Project #: 1009391-0008-01
Project Name: IL 38
Project Location/State: Kane County IL
Lab Project #: 50011864
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL RCRA	pH/% Solids					Comments
1		3011-38-B06 (0-1)	2-15-16	1140	2	S	X	X	X	X	X					
2		3011-38-B05 (0-1)	2-15-16	1145	2	S	X	X	X	X	X					
3		3011-38-B04 (0-1)	2-15-16	1155	2	S	X	X	X	X	X					
4		3011-38-B03 (0-1)	2-15-16	1200	2	S	X	X	X	X	X					
5		3011-38-B02 (0-1)	2-15-16	1205	2	S	X	X	X	X	X					
6		3011-38-B01 (0-1)	2-15-16	1210	2	S	X	X	X	X	X					

2-15-16

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
[signature]	EC	2-15-16	1540	P. Neal	TA	2/15/16	1540
P Neal	TA	2/15/16	1710	[signature]	TA-Chi	2/16/16	0800

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:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107595-1

Login Number: 107595
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9,2.7,3.0,2.4,3.2
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	

Illinois Environmental Protection Agency

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, inclduding number and street):
45W 800 to 46W 200 blocks of IL 38 ISGS #3011-39 (Agricultural Land)

City: Maple Park State: IL Zip Code: 60151

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: 41.899526 (Decimal Degrees) Longitude: -88.506324 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.899526 Longitude: -88.506324

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 #3011-39 (Agricultural Land). Refer to PSI Report for ISGS #3011-39 (Agricultural Land) including Table 4-4, and Figures 4-6A&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 J107595-2, J107595-3, and J107595-6.

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

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

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

Company Name: Ecology and Environment, Inc.

Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

3/17/16
Date:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055698
STATE OF ILLINOIS

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

Attachment A
ISGS# 3011-39 (Agricultural Land)

Analytical results from sample points collected at adjacent properties ISGS# 3011-40 and ISGS# 3011-44 were used to delineate areas of impact.

III (a)
Soil sample points:

- 3011-39-B01
- 3011-39-B02
- 3011-39-B03
- 3011-39-B04
- 3011-39-B05
- 3011-39-B06
- 3011-40-B02
- 3011-44-B01

III (b)

Lab packages with associated sample locations

J107595-2
- 3011-39-B01
- 3011-39-B02
- 3011-39-B03
- 3011-39-B04
- 3011-39-B05
- 3011-39-B06

J107595-3
- 3011-40-B02

J107595-6
- 3011-44-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.

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-39 (Agricultural Land)				Comparison Criteria			
BORING	3011-39-B01		3011-39-B02	3011-39-B03	MACs			TACO
SAMPLE	3011-39-B01 (0-1)	3011-39-B01 (0-1)D	3011-39-B02 (0-1)	3011-39-B03 (0-1)				
MATRIX	Soil	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1	0-1				
pH	8.37	8.36	8.77	8.58	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (mg/kg)								
Acetone	ND U	ND U	ND U	ND U	25	--	--	--
SVOCs (mg/kg)								
Anthracene	**0.011 J**	**0.0093 J**	**0.012 J**	**0.024 J**	12,000	--	--	--
Benzo[a]anthracene	**0.058**	**0.057**	**0.083**	**0.19**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.089**	**0.074**	**0.11** †	**0.25** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.16**	**0.12**	**0.2**	**0.42**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.095**	**0.087**	**0.14**	**0.19**	--	--	--	--
Benzo[k]fluoranthene	**0.063**	**0.05**	**0.094**	**0.19**	9	--	--	--
Butyl benzyl phthalate	ND U	ND U	ND U	**0.081 J**	930	--	--	--
Chrysene	**0.074**	**0.078**	**0.13**	**0.25**	88	--	--	--
Dibenzo(a,h)anthracene	ND U	ND U	ND U	ND U	0.09	0.42	0.2	--
Fluoranthene	**0.079**	**0.069**	**0.12**	**0.27**	3,100	--	--	--
Fluorene	ND U	ND U	ND U	**0.0057 J**	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.083**	**0.059**	**0.12**	**0.18**	0.9	1.6	0.9	--
Phenanthrene	**0.047**	**0.044**	**0.059**	**0.13**	--	--	--	--
Pyrene	**0.18**	**0.17**	**0.29**	**0.61**	2,300	--	--	--
Inorganics (mg/kg)								
Antimony	**0.34 J**	**0.53 J**	**0.43 J**	**0.43 J**	5	--	--	--
Arsenic	**3.5**	**3.4**	**6.4**	**2.5**	11.3	13	--	--
Barium	**54**	**56**	**66**	**22**	1,500	--	--	--
Beryllium	**0.22**	**0.24**	**0.46**	**0.16 J**	22	--	--	--
Boron	**8**	**7.3**	**3.3**	**9.6**	40	--	--	--
Cadmium	**0.18**	**0.17**	ND U	**0.16**	5.2	--	--	--
Calcium	**130,000**	**130,000**	**30,000**	**150,000**	--	--	--	--
Chromium	**13**	**11**	**11**	**8.7**	21	--	--	--
Cobalt	**4.4**	**4.5**	**11**	**3.2**	20	--	--	--
Copper	**13**	**11**	**13**	**9.7**	2,900	--	--	--
Iron	**8,500**	**7,700**	**13,000**	**7,400**	15,000	15,900	--	--
Lead	**70**	**69**	**18**	**57**	107	--	--	--
Magnesium	**72,000**	**70,000**	**20,000**	**93,000**	325,000	--	--	--
Manganese	**400**	**420**	**370**	**330**	630	636	--	--
Mercury	**0.016 J**	**0.017**	**0.013 J**	**0.014 J**	0.89	--	--	--
Nickel	**9.8**	**9.8**	**16**	**7.4**	100	--	--	--
Potassium	**550**	**560**	**700**	**520**	--	--	--	--
Selenium	ND U	**0.61**	**0.37 J**	ND U	1.3	--	--	--
Silver	ND U	ND U	ND U	ND U	4.4	--	--	--
Sodium	**1,900**	**2,100**	**2,400**	**1,300**	--	--	--	--
Vanadium	**14**	**13**	**20**	**9.2**	550	--	--	--
Zinc	**49**	**54**	**49**	**44**	5,100	--	--	--
TCLP Metals (mg/L)								
Barium	**0.46 J**	**0.56**	**0.52**	**0.27 J**	--	--	--	2
Boron	**0.08 J**	**0.073 J**	**0.07 J**	**0.063 J**	--	--	--	2
Manganese	**0.63 L**	**1 L**	**3.3 L**	**1.2 L**	--	--	--	0.15
Nickel	ND U	ND U	**0.013 J**	ND U	--	--	--	0.1
Zinc	**0.051 J**	**0.051 J**	**0.048 J**	**0.081 J**	--	--	--	5
SPLP Metals (mg/L)								
Manganese	**1.1 L**	**1.4 L**	**1.2 L**	**0.67 L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-39 (Agricultural Land)			Comparison Criteria			
BORING	3011-39-B04	3011-39-B05	3011-39-B06	MACs			TACO
SAMPLE	3011-39-B04 (0-1)	3011-39-B05 (0-1)	3011-39-B06 (0-1)				
MATRIX	Soil	Soil	Soil				
DEPTH (feet)	0-1	0-1	0-1				
pH	8.43	8.28	8.39	Most Stringent	Within an MSA	Within Chicago	SCGIER
VOCs (mg/kg)							
Acetone	ND U	**0.045**	ND U	25	--	--	--
SVOCs (mg/kg)							
Anthracene	**0.017 J**	**0.0094 J**	**0.0065 J**	12,000	--	--	--
Benzo[a]anthracene	**0.092**	**0.054**	**0.047**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.13** †	**0.072**	**0.052**	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.23**	**0.11**	**0.1**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.072**	**0.077**	**0.041**	--	--	--	--
Benzo[k]fluoranthene	**0.099**	**0.052**	**0.051**	9	--	--	--
Butyl benzyl phthalate	ND U	ND U	ND U	930	--	--	--
Chrysene	**0.13**	**0.073**	**0.068**	88	--	--	--
Dibenzo(a,h)anthracene	**0.018 J**	ND U	ND U	0.09	0.42	0.2	--
Fluoranthene	**0.21**	**0.077**	**0.067**	3,100	--	--	--
Fluorene	ND U	ND U	ND U	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.067**	**0.061**	**0.053**	0.9	1.6	0.9	--
Phenanthrene	**0.089**	**0.052**	**0.042**	--	--	--	--
Pyrene	**0.26**	**0.19**	**0.15**	2,300	--	--	--
Inorganics (mg/kg)							
Antimony	**0.48 J**	**0.54 J**	**0.61 J**	5	--	--	--
Arsenic	**2.7**	**5.5**	**3.1**	11.3	13	--	--
Barium	**54**	**56**	**73**	1,500	--	--	--
Beryllium	**0.21 J**	**0.38**	**0.3**	22	--	--	--
Boron	**8.3**	**6.5**	**9.1**	40	--	--	--
Cadmium	**0.2**	**0.18**	**0.19**	5.2	--	--	--
Calcium	**140,000**	**100,000**	**110,000**	--	--	--	--
Chromium	**8.8**	**9.5**	**9**	21	--	--	--
Cobalt	**3.8**	**5.3**	**4.6**	20	--	--	--
Copper	**12**	**20**	**11**	2,900	--	--	--
Iron	**7,400**	**11,000**	**7,500**	15,000	15,900	--	--
Lead	**53**	**46**	**53**	107	--	--	--
Magnesium	**79,000**	**48,000**	**50,000**	325,000	--	--	--
Manganese	**340**	**380**	**360**	630	636	--	--
Mercury	ND U	**0.012 J**	ND U	0.89	--	--	--
Nickel	**8.9**	**12**	**9.7**	100	--	--	--
Potassium	**560**	**700**	**680**	--	--	--	--
Selenium	**0.51 J**	**0.59**	ND U	1.3	--	--	--
Silver	**0.41**	ND U	ND U	4.4	--	--	--
Sodium	**1,300**	**1,700**	**1,600**	--	--	--	--
Vanadium	**12**	**17**	**14**	550	--	--	--
Zinc	**45**	**54**	**50**	5,100	--	--	--
TCLP Metals (mg/L)							
Barium	**0.39 J**	**0.53**	**0.45 J**	--	--	--	2
Boron	**0.093 J**	**0.12 J**	**0.11 J**	--	--	--	2
Manganese	**0.79 L**	**4 L**	**1 L**	--	--	--	0.15
Nickel	ND U	**0.015 J**	ND U	--	--	--	0.1
Zinc	**0.041 J**	**0.075 J**	**0.078 J**	--	--	--	5
SPLP Metals (mg/L)							
Manganese	**0.13**	**0.39 L**	**0.15**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-40 (4 Residences)		Comparison Criteria			
BORING	3011-40-B02		MACs			TACO
SAMPLE	3011-40-B02 (0-1)					
MATRIX	Soil					
DEPTH (feet)	0-1		Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.65					
VOCs (mg/kg)						
Acetone	**0.038**		25	--	--	--
SVOCs (mg/kg)						
2-Methylnaphthalene	**0.0074**	**J**	--	--	--	--
Acenaphthene	**0.015**	**J**	570	--	--	--
Anthracene	**0.061**		12,000	--	--	--
Benzo[a]anthracene	**0.15**		0.9	1.8	1.1	--
Benzo[a]pyrene	**0.16**	†	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.23**		0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.12**		--	--	--	--
Benzo[k]fluoranthene	**0.099**		9	--	--	--
Butyl benzyl phthalate	**0.12**	**J**	930	--	--	--
Chrysene	**0.17**		88	--	--	--
Fluoranthene	**0.21**		3,100	--	--	--
Fluorene	**0.022**	**J**	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.11**		0.9	1.6	0.9	--
Naphthalene	**0.015**	**J**	1.8	--	--	--
Phenanthrene	**0.24**		--	--	--	--
Pyrene	**0.48**		2,300	--	--	--
Inorganics (mg/kg)						
Antimony	ND	U	5	--	--	--
Arsenic	**3.8**		11.3	13	--	--
Barium	**60**		1,500	--	--	--
Beryllium	**0.39**	**J**	22	--	--	--
Boron	**8.8**		40	--	--	--
Cadmium	**0.33**	**J**	5.2	--	--	--
Calcium	**130,000**		--	--	--	--
Chromium	**9.4**		21	--	--	--
Cobalt	**4**		20	--	--	--
Copper	**13**		2,900	--	--	--
Iron	**8,500**		15,000	15,900	--	--
Lead	**47**		107	--	--	--
Magnesium	**74,000**		325,000	--	--	--
Manganese	**540**		630	636	--	--
Mercury	**0.016**	**J**	0.89	--	--	--
Nickel	**7.8**		100	--	--	--
Potassium	**900**		--	--	--	--
Sodium	**1,500**		--	--	--	--
Vanadium	**11**		550	--	--	--
Zinc	**43**		5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.51**		--	--	--	2
Boron	**0.067**	**J**	--	--	--	2
Cobalt	**0.02**	**J**	--	--	--	1
Manganese	**5.1**	**L**	--	--	--	0.15
Nickel	**0.015**	**J**	--	--	--	0.1
Zinc	**0.082**	**J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.22**	**L**	--	--	--	0.15

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

CONTAMINANTS OF CONCERN

SITE	ISGS #3011-44 (Residence)	Comparison Criteria			
BORING	3011-44-B01	MACs			TACO
SAMPLE	3011-44-B01 (0-1)				
MATRIX	Soil				
DEPTH (feet)	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.42				
VOCs (None Detected)					
SVOCs (mg/kg)					
2-Methylnaphthalene	**0.016** J	--	--	--	--
Acenaphthene	**0.018** J	570	--	--	--
Anthracene	**0.06**	12,000	--	--	--
Benzo[a]anthracene	**0.2**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.21** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.31**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.1**	--	--	--	--
Benzo[k]fluoranthene	**0.14**	9	--	--	--
Chrysene	**0.25**	88	--	--	--
Dibenzo(a,h)anthracene	**0.028** J	0.09	0.42	0.2	--
Fluoranthene	**0.54**	3,100	--	--	--
Fluorene	**0.026** J	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.098**	0.9	1.6	0.9	--
Naphthalene	**0.019** J	1.8	--	--	--
Phenanthrene	**0.31**	--	--	--	--
Pyrene	**0.42**	2,300	--	--	--
Inorganics (mg/kg)					
Antimony	**0.48** J	5	--	--	--
Arsenic	**6.6**	11.3	13	--	--
Barium	**67**	1,500	--	--	--
Beryllium	**0.39**	22	--	--	--
Boron	**4.9**	40	--	--	--
Cadmium	**0.45**	5.2	--	--	--
Calcium	**71,000**	--	--	--	--
Chromium	**11**	21	--	--	--
Cobalt	**7**	20	--	--	--
Copper	**14**	2,900	--	--	--
Iron	**12,000**	15,000	15,900	--	--
Lead	**56**	107	--	--	--
Magnesium	**39,000**	325,000	--	--	--
Manganese	**420**	630	636	--	--
Mercury	**0.021**	0.89	--	--	--
Nickel	**16**	100	--	--	--
Potassium	**740**	--	--	--	--
Selenium	**0.45** J	1.3	--	--	--
Sodium	**2,300**	--	--	--	--
Vanadium	**18**	550	--	--	--
Zinc	**160**	5,100	--	--	--
TCLP Metals (mg/L)					
Barium	**0.57**	--	--	--	2
Boron	**0.079** J	--	--	--	2
Manganese	**0.68** L	--	--	--	0.15
Zinc	**0.029** J	--	--	--	5
SPLP Metals (mg/L)					
Manganese	**2.8** 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: 500-107595-2
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:
2/29/2016 4:26:38 PM
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Designee for

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Table of Contents

Job ID: 500-107595-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107595-2

Comments
No additional comments.

Receipt
The samples were received on 2/16/2016 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 2.4º C, 2.7º C, 2.9º C, 3.0º C and 3.2º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323718 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for batch 500-323718 recovered outside control limits for the following analyte: Chloromethane. This analyte was biased high in the LCS 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 one base/neutral surrogate outside acceptance limits: 3011-39-B06 (0-1) (500-107595-7), 3011-39-B04 (0-1) (500-107595-8), 3011-39-B01 (0-1) (500-107595-9), 3011-39-B01 (0-1)D (500-107595-10), 3011-39-B02 (0-1) (500-107595-11), 3011-39-B03 (0-1) (500-107595-12), 3011-39-B05 (0-1) (500-107595-13), (500-107595-E-1-A), (500-107595-E-1-B MS) and (500-107595-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 500-323833 and analytical batch 500-324356 contained Chromium above the reporting limit (RL). Associated samples 3011-39-B06 (0-1) (500-107595-7), 3011-39-B04 (0-1) (500-107595-8), 3011-39-B01 (0-1) (500-107595-9), 3011-39-B01 (0-1)D (500-107595-10), 3011-39-B02 (0-1) (500-107595-11), 3011-39-B03 (0-1) (500-107595-12), 3011-39-B05 (0-1) (500-107595-13) and (500-107595-E-1-J) 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: 500-107595-2

Client Sample ID: 3011-39-B06 (0-1) — Lab Sample ID: 500-107595-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.042		0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0065	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.067		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.15		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.047		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.068		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.10		0.035	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.051		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.052		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.053		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.041		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.61	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.1		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	73		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	9.1		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.19		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.0	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	11		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7500		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	53		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	50000		5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	360		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.7		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	680		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	1600		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	50		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.11	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.078	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.15		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.39		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-39-B04 (0-1) — Lab Sample ID: 500-107595-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.089		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	0.21		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.26		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.092		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.23		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.099		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.13		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.067		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107595-2

Client Sample ID: 3011-39-B04 (0-1) (Continued) — Lab Sample ID: 500-107595-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibenz(a,h)anthracene	0.018	J	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.072		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.48	J	1.1	0.24	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.7		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	54		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.21	J	0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	8.3		2.8	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.8	B	0.57	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.8		0.28	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7400		11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	53		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	79000		57	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	340		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.9		0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	560		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.51	J	0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Silver	0.41		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.28	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	45		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.093	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.79		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.041	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.13		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.43		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-39-B01 (0-1) — Lab Sample ID: 500-107595-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.047		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.079		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.18		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.058		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.074		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.063		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.089		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.083		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.095		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.34	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.5		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	54		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.22		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	8.0		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107595-2

Client Sample ID: 3011-39-B01 (0-1) (Continued) — Lab Sample ID: 500-107595-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	130000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	13	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.4		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8500		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	70		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	72000		56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	400		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.8		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	550		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	1900		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	49		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.46	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.63		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.051	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.37		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-39-B01 (0-1)D — Lab Sample ID: 500-107595-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.044		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0093	J	0.037	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.069		0.037	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.17		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.057		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.078		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.037	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.050		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.074		0.037	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.059		0.037	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.087		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.53	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.4		0.55	0.25	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.55	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.24		0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	7.3		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.17		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	130000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.55	0.095	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.5		0.28	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.55	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7700		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	69		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	70000		55	22	mg/Kg	10	☼	6010B	Total/NA
Manganese	420		0.55	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.8		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-39-B01 (0-1)D (Continued) — Lab Sample ID: 500-107595-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	560		28	4.5	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.61		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Sodium	2100		55	7.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.28	0.080	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.56		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.073	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.051	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.4		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.017		0.017	0.0091	mg/Kg	1	☼	7471B	Total/NA
pH	8.36		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-39-B02 (0-1) — Lab Sample ID: 500-107595-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.059		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.012	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.12		0.037	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.29		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.083		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.094		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.11		0.037	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.12		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.14		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.43	J	1.0	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.4		0.52	0.24	mg/Kg	1	☼	6010B	Total/NA
Barium	66		0.52	0.096	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.46		0.21	0.045	mg/Kg	1	☼	6010B	Total/NA
Boron	3.3		2.6	0.37	mg/Kg	1	☼	6010B	Total/NA
Calcium	30000		10	3.4	mg/Kg	1	☼	6010B	Total/NA
Chromium	11	B	0.52	0.090	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.26	0.059	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.52	0.11	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		10	4.0	mg/Kg	1	☼	6010B	Total/NA
Lead	18		0.26	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	20000		5.2	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	370		0.52	0.10	mg/Kg	1	☼	6010B	Total/NA
Nickel	16		0.52	0.14	mg/Kg	1	☼	6010B	Total/NA
Potassium	700		26	4.3	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.37	J	0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Sodium	2400		52	6.9	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.26	0.076	mg/Kg	1	☼	6010B	Total/NA
Zinc	49		1.0	0.33	mg/Kg	1	☼	6010B	Total/NA
Barium	0.52		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.070	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	3.3		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-39-B02 (0-1) (Continued) — Lab Sample ID: 500-107595-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	0.048	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.77		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-39-B03 (0-1) — Lab Sample ID: 500-107595-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.0057	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.024	J	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.27		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.61		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Butyl benzyl phthalate	0.081	J	0.19	0.072	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.19		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.25		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.42		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.19		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.25		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.18		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.19		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.43	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.5		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	22		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.16	J	0.22	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	9.6		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16		0.11	0.032	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.7	B	0.56	0.096	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.2		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	9.7		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	7400		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	57		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	93000		56	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	330		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.4		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	1300		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.2		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		1.1	0.35	mg/Kg	1	☼	6010B	Total/NA
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.063	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.081	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.67		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.014	J	0.017	0.0087	mg/Kg	1	☼	7471B	Total/NA
pH	8.58		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-39-B05 (0-1) — Lab Sample ID: 500-107595-13

This Detection Summary does not include radiochemical test results.

Client Sample ID: 3011-39-B05 (0-1) (Continued)

Lab Sample ID: 500-107595-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.045		0.018	0.0034	mg/Kg	1	☼	8260B	Total/NA
Phenanthrene	0.052		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0094	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.077		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.19		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.054		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.073		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.052		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.072		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.061		0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.077		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.54	J	1.1	0.24	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.5		0.57	0.27	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.38		0.23	0.050	mg/Kg	1	☼	6010B	Total/NA
Boron	6.5		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.18		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	100000		110	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.5	B	0.57	0.099	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.3		0.29	0.065	mg/Kg	1	☼	6010B	Total/NA
Copper	20		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	46		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	48000		5.7	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	380		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	700		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.59		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	1700		57	7.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.29	0.084	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.53		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.12	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	4.0		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.075	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.39		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.012	J	0.018	0.0093	mg/Kg	1	☼	7471B	Total/NA
pH	8.28		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107595-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107595-7	3011-39-B06 (0-1)	Solid	02/15/16 11:05	02/16/16 08:00
500-107595-8	3011-39-B04 (0-1)	Solid	02/15/16 11:15	02/16/16 08:00
500-107595-9	3011-39-B01 (0-1)	Solid	02/15/16 12:40	02/16/16 08:00
500-107595-10	3011-39-B01 (0-1)D	Solid	02/15/16 12:40	02/16/16 08:00
500-107595-11	3011-39-B02 (0-1)	Solid	02/15/16 12:50	02/16/16 08:00
500-107595-12	3011-39-B03 (0-1)	Solid	02/15/16 12:55	02/16/16 08:00
500-107595-13	3011-39-B05 (0-1)	Solid	02/15/16 13:20	02/16/16 08:00

Client Sample ID: 3011-39-B06 (0-1)
Date Collected: 02/15/16 11:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-7
Matrix: Solid
Percent Solids: 88.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0035	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Benzene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Bromodichloromethane	<0.0045		0.0045	0.00076	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Bromoform	<0.0045		0.0045	0.00092	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Carbon disulfide	<0.0045		0.0045	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Carbon tetrachloride	<0.0045		0.0045	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Chloroform	<0.0045		0.0045	0.00088	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Chloromethane	<0.0045	*	0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00092	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Dibromochloromethane	<0.0045		0.0045	0.00052	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,1-Dichloroethane	<0.0045		0.0045	0.00093	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,2-Dichloroethane	<0.0045		0.0045	0.00067	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00093	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Styrene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00072	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Tetrachloroethene	<0.0045		0.0045	0.00094	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00087	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1
Xylenes, Total	<0.0090		0.0090	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 122*	*02/16/16 08:50*	*02/20/16 21:01*	*1*
Dibromofluoromethane	*90*		*75 - 120*	*02/16/16 08:50*	*02/20/16 21:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/16/16 08:50*	*02/20/16 21:01*	*1*
Toluene-d8 (Surr)	*110*		*75 - 122*	*02/16/16 08:50*	*02/20/16 21:01*	*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	☼	02/19/16 07:12	02/26/16 14:51	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1

Client Sample ID: 3011-39-B06 (0-1)
Date Collected: 02/15/16 11:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-7
Matrix: Solid
Percent Solids: 88.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Naphthalene	<0.035		0.035	0.0055	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Hexachlorocyclopentadiene	<0.72		0.72	0.20	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2-Methylnaphthalene	<0.035		0.035	0.0065	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,4-Dinitrophenol	<0.72		0.72	0.62	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Acenaphthene	<0.035		0.035	0.0064	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Hexachlorobenzene	<0.072		0.072	0.0082	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Phenanthrene	**0.042**		0.035	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Anthracene	**0.0065**	**J**	0.035	0.0059	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Fluoranthene	**0.067**		0.035	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Pyrene	**0.15**		0.035	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Benzo[a]anthracene	**0.047**		0.035	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1

Client Sample ID: 3011-39-B06 (0-1)
Date Collected: 02/15/16 11:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-7
Matrix: Solid
Percent Solids: 88.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.068**		0.035	0.0097	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Benzo[b]fluoranthene	**0.10**		0.035	0.0077	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Benzo[k]fluoranthene	**0.051**		0.035	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Benzo[a]pyrene	**0.052**		0.035	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Indeno[1,2,3-cd]pyrene	**0.053**		0.035	0.0092	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
Benzo[g,h,i]perylene	**0.041**		0.035	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*80*		*25 - 110*	*02/19/16 07:12*	*02/26/16 14:51*	*1*
Phenol-d5	*79*		*31 - 110*	*02/19/16 07:12*	*02/26/16 14:51*	*1*
Nitrobenzene-d5	*69*		*25 - 115*	*02/19/16 07:12*	*02/26/16 14:51*	*1*
2-Fluorobiphenyl	*74*		*25 - 119*	*02/19/16 07:12*	*02/26/16 14:51*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/19/16 07:12*	*02/26/16 14:51*	*1*
Terphenyl-d14	*199*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 14:51*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.61**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Arsenic	**3.1**		0.56	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Barium	**73**		0.56	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Beryllium	**0.30**		0.22	0.049	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Boron	**9.1**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Cadmium	**0.19**		0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Calcium	**110000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 13:53	10
Chromium	**9.0**	**B**	0.56	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Cobalt	**4.6**		0.28	0.063	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Copper	**11**		0.56	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Iron	**7500**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Lead	**53**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Magnesium	**50000**		5.6	2.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Manganese	**360**		0.56	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Nickel	**9.7**		0.56	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Potassium	**680**		28	4.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Sodium	**1600**		56	7.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Vanadium	**14**		0.28	0.082	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	1
Zinc	**50**		1.1	0.35	mg/Kg	☼	02/21/16 17:45	02/24/16 21:17	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		02/22/16 09:43	02/23/16 03:26	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 03:26	1
Boron	**0.11**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:26	1

Client Sample ID: 3011-39-B06 (0-1)
Date Collected: 02/15/16 11:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-7
Matrix: Solid
Percent Solids: 88.9

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		02/22/16 09:43	02/23/16 03:26	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:26	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:26	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 03:26	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 03:26	1
Manganese	**1.0**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:26	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:26	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 03:26	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:26	1
Zinc	**0.078**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 03:26	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		02/22/16 09:48	02/24/16 00:52	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		02/22/16 09:43	02/23/16 13:41	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:41	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:16	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0097	mg/Kg	☼	02/19/16 16:00	02/22/16 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.39**		0.200	0.200	SU			02/18/16 19:38	1

Client Sample ID: 3011-39-B04 (0-1)
Date Collected: 02/15/16 11:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-8
Matrix: Solid
Percent Solids: 88.1

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	☼	02/16/16 08:50	02/20/16 21:26	1
Benzene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Bromodichloromethane	<0.0054		0.0054	0.00091	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Bromoform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Bromomethane	<0.0054		0.0054	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
2-Butanone (MEK)	<0.0054		0.0054	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Carbon disulfide	<0.0054		0.0054	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Carbon tetrachloride	<0.0054		0.0054	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Chlorobenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Chloroethane	<0.0054		0.0054	0.0023	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Chloroform	<0.0054		0.0054	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Chloromethane	<0.0054	*	0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
cis-1,2-Dichloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
cis-1,3-Dichloropropene	<0.0054		0.0054	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Dibromochloromethane	<0.0054		0.0054	0.00062	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,1-Dichloroethane	<0.0054		0.0054	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,2-Dichloroethane	<0.0054		0.0054	0.00080	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,1-Dichloroethene	<0.0054		0.0054	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,2-Dichloropropane	<0.0054		0.0054	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,3-Dichloropropene, Total	<0.0054		0.0054	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Ethylbenzene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Methylene Chloride	<0.0054		0.0054	0.0041	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Methyl tert-butyl ether	<0.0054		0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Styrene	<0.0054		0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,1,2,2-Tetrachloroethane	<0.0054		0.0054	0.00086	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Tetrachloroethene	<0.0054		0.0054	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Toluene	<0.0054		0.0054	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
trans-1,2-Dichloroethene	<0.0054		0.0054	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
trans-1,3-Dichloropropene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,1,1-Trichloroethane	<0.0054		0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
1,1,2-Trichloroethane	<0.0054		0.0054	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Trichloroethene	<0.0054		0.0054	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Vinyl acetate	<0.0054		0.0054	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Vinyl chloride	<0.0054		0.0054	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 21:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 122*	*02/16/16 08:50*	*02/20/16 21:26*	*1*
Dibromofluoromethane	*91*		*75 - 120*	*02/16/16 08:50*	*02/20/16 21:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 134*	*02/16/16 08:50*	*02/20/16 21:26*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/16/16 08:50*	*02/20/16 21:26*	*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	☼	02/19/16 07:12	02/26/16 12:29	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1

Client Sample ID: 3011-39-B04 (0-1)
Date Collected: 02/15/16 11:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-8
Matrix: Solid
Percent Solids: 88.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Phenanthrene	**0.089**		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Anthracene	**0.017**	**J**	0.037	0.0062	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Fluoranthene	**0.21**		0.037	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Pyrene	**0.26**		0.037	0.0074	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Benzo[a]anthracene	**0.092**		0.037	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1

Client Sample ID: 3011-39-B04 (0-1)
Date Collected: 02/15/16 11:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-8
Matrix: Solid
Percent Solids: 88.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.13**		0.037	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Benzo[b]fluoranthene	**0.23**		0.037	0.0080	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Benzo[k]fluoranthene	**0.099**		0.037	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Benzo[a]pyrene	**0.13**		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Indeno[1,2,3-cd]pyrene	**0.067**		0.037	0.0096	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Dibenz(a,h)anthracene	**0.018**	**J**	0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
Benzo[g,h,i]perylene	**0.072**		0.037	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*87*		*25 - 110*	*02/19/16 07:12*	*02/26/16 12:29*	*1*
Phenol-d5	*83*		*31 - 110*	*02/19/16 07:12*	*02/26/16 12:29*	*1*
Nitrobenzene-d5	*75*		*25 - 115*	*02/19/16 07:12*	*02/26/16 12:29*	*1*
2-Fluorobiphenyl	*79*		*25 - 119*	*02/19/16 07:12*	*02/26/16 12:29*	*1*
2,4,6-Tribromophenol	*82*		*35 - 137*	*02/19/16 07:12*	*02/26/16 12:29*	*1*
Terphenyl-d14	*158*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 12:29*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.48**	**J**	1.1	0.24	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Arsenic	**2.7**		0.57	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Barium	**54**		0.57	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Beryllium	**0.21**	**J**	0.23	0.049	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Boron	**8.3**		2.8	0.40	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Cadmium	**0.20**		0.11	0.033	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Calcium	**140000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 13:57	10
Chromium	**8.8**	**B**	0.57	0.097	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Cobalt	**3.8**		0.28	0.064	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Copper	**12**		0.57	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Iron	**7400**		11	4.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Lead	**53**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Magnesium	**79000**		57	23	mg/Kg	☼	02/21/16 17:45	02/25/16 13:57	10
Manganese	**340**		0.57	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Nickel	**8.9**		0.57	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Potassium	**560**		28	4.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Selenium	**0.51**	**J**	0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Silver	**0.41**		0.28	0.066	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Sodium	**1300**		57	7.5	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Vanadium	**12**		0.28	0.083	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	1
Zinc	**45**		1.1	0.36	mg/Kg	☼	02/21/16 17:45	02/24/16 21:22	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		02/22/16 09:43	02/23/16 03:33	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 03:33	1
Boron	**0.093**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:33	1

Client Sample ID: 3011-39-B04 (0-1)
Date Collected: 02/15/16 11:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-8
Matrix: Solid
Percent Solids: 88.1

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		02/22/16 09:43	02/23/16 03:33	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:33	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:33	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 03:33	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 03:33	1
Manganese	**0.79**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:33	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:33	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 03:33	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:33	1
Zinc	**0.041**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 03:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.13**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 00:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/22/16 09:43	02/23/16 13:45	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:45	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:18	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	☼	02/19/16 16:00	02/22/16 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.43**		0.200	0.200	SU			02/18/16 19:44	1

Client Sample ID: 3011-39-B01 (0-1)
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-9
Matrix: Solid
Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0037	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Benzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Bromodichloromethane	<0.0048		0.0048	0.00080	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Bromoform	<0.0048		0.0048	0.00097	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
2-Butanone (MEK)	<0.0048		0.0048	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Carbon disulfide	<0.0048		0.0048	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Carbon tetrachloride	<0.0048		0.0048	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Chlorobenzene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Chloroethane	<0.0048		0.0048	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Chloroform	<0.0048		0.0048	0.00093	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Chloromethane	<0.0048	*	0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
cis-1,2-Dichloroethene	<0.0048		0.0048	0.00097	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
cis-1,3-Dichloropropene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Dibromochloromethane	<0.0048		0.0048	0.00055	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,1-Dichloroethane	<0.0048		0.0048	0.00098	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,2-Dichloroethane	<0.0048		0.0048	0.00071	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,1-Dichloroethene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,2-Dichloropropane	<0.0048		0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,3-Dichloropropene, Total	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Ethylbenzene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Methylene Chloride	<0.0048		0.0048	0.0036	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.00098	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Methyl tert-butyl ether	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Styrene	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,1,2,2-Tetrachloroethane	<0.0048		0.0048	0.00076	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Tetrachloroethene	<0.0048		0.0048	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Toluene	<0.0048		0.0048	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
trans-1,2-Dichloroethene	<0.0048		0.0048	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
trans-1,3-Dichloropropene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,1,1-Trichloroethane	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
1,1,2-Trichloroethane	<0.0048		0.0048	0.00092	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Trichloroethene	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Vinyl acetate	<0.0048		0.0048	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Vinyl chloride	<0.0048		0.0048	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 21:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/16/16 08:50*	*02/20/16 21:52*	*1*
Dibromofluoromethane	*90*		*75 - 120*	*02/16/16 08:50*	*02/20/16 21:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 134*	*02/16/16 08:50*	*02/20/16 21:52*	*1*
Toluene-d8 (Surr)	*107*		*75 - 122*	*02/16/16 08:50*	*02/20/16 21:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1

Client Sample ID: 3011-39-B01 (0-1)
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-9
Matrix: Solid
Percent Solids: 87.1

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	☼	02/19/16 07:12	02/26/16 15:19	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,4,5-Trichlorophenol	<0.36		0.36	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2-Nitrophenol	<0.36		0.36	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Fluorene	<0.036		0.036	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Phenanthrene	**0.047**		0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Anthracene	**0.011**	**J**	0.036	0.0061	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Fluoranthene	**0.079**		0.036	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Pyrene	**0.18**		0.036	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Benzo[a]anthracene	**0.058**		0.036	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1

Client Sample ID: 3011-39-B01 (0-1)
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-9
Matrix: Solid
Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.074**		0.036	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Benzo[b]fluoranthene	**0.16**		0.036	0.0079	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Benzo[k]fluoranthene	**0.063**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Benzo[a]pyrene	**0.089**		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Indeno[1,2,3-cd]pyrene	**0.083**		0.036	0.0095	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
Benzo[g,h,i]perylene	**0.095**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*89*		*25 - 110*	*02/19/16 07:12*	*02/26/16 15:19*	*1*
Phenol-d5	*86*		*31 - 110*	*02/19/16 07:12*	*02/26/16 15:19*	*1*
Nitrobenzene-d5	*77*		*25 - 115*	*02/19/16 07:12*	*02/26/16 15:19*	*1*
2-Fluorobiphenyl	*80*		*25 - 119*	*02/19/16 07:12*	*02/26/16 15:19*	*1*
2,4,6-Tribromophenol	*82*		*35 - 137*	*02/19/16 07:12*	*02/26/16 15:19*	*1*
Terphenyl-d14	*204*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 15:19*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.34**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Arsenic	**3.5**		0.56	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Barium	**54**		0.56	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Beryllium	**0.22**		0.22	0.049	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Boron	**8.0**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Cadmium	**0.18**		0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Calcium	**130000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 14:01	10
Chromium	**13**	**B**	0.56	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Cobalt	**4.4**		0.28	0.063	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Copper	**13**		0.56	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Iron	**8500**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Lead	**70**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Magnesium	**72000**		56	23	mg/Kg	☼	02/21/16 17:45	02/25/16 14:01	10
Manganese	**400**		0.56	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Nickel	**9.8**		0.56	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Potassium	**550**		28	4.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Sodium	**1900**		56	7.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Vanadium	**14**		0.28	0.082	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1
Zinc	**49**		1.1	0.36	mg/Kg	☼	02/21/16 17:45	02/24/16 21:28	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.46**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:39	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 03:39	1
Boron	**0.080**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:39	1

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

TestAmerica Job ID: 500-107595-2

Client Sample ID: 3011-39-B01 (0-1)
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-9
Matrix: Solid
Percent Solids: 87.1

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		02/22/16 09:43	02/23/16 03:39	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:39	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:39	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 03:39	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 03:39	1
Manganese	**0.63**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:39	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:39	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 03:39	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:39	1
Zinc	**0.051**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 03:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1.1**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 01:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/22/16 09:43	02/23/16 13:49	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:49	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		02/22/16 15:15	02/23/16 12:20	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.016**	**J**	0.017	0.0087	mg/Kg	☼	02/19/16 16:00	02/22/16 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.37**		0.200	0.200	SU			02/19/16 21:10	1

Client Sample ID: 3011-39-B01 (0-1)D
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-10
Matrix: Solid
Percent Solids: 86.7

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	☼	02/16/16 08:50	02/20/16 22:17	1
Benzene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Bromodichloromethane	<0.0049		0.0049	0.00084	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Bromoform	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Bromomethane	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
2-Butanone (MEK)	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Carbon disulfide	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Carbon tetrachloride	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Chlorobenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Chloroethane	<0.0049		0.0049	0.0021	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Chloroform	<0.0049		0.0049	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Chloromethane	<0.0049	*	0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
cis-1,2-Dichloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
cis-1,3-Dichloropropene	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Dibromochloromethane	<0.0049		0.0049	0.00057	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,1-Dichloroethane	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,2-Dichloroethane	<0.0049		0.0049	0.00073	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,1-Dichloroethene	<0.0049		0.0049	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,2-Dichloropropane	<0.0049		0.0049	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,3-Dichloropropene, Total	<0.0049		0.0049	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Ethylbenzene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Methylene Chloride	<0.0049		0.0049	0.0037	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Methyl tert-butyl ether	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Styrene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,1,2,2-Tetrachloroethane	<0.0049		0.0049	0.00079	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Tetrachloroethene	<0.0049		0.0049	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Toluene	<0.0049		0.0049	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
trans-1,2-Dichloroethene	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
trans-1,3-Dichloropropene	<0.0049		0.0049	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,1,1-Trichloroethane	<0.0049		0.0049	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
1,1,2-Trichloroethane	<0.0049		0.0049	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Trichloroethene	<0.0049		0.0049	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Vinyl acetate	<0.0049		0.0049	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Vinyl chloride	<0.0049		0.0049	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1
Xylenes, Total	<0.0099		0.0099	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 122*	*02/16/16 08:50*	*02/20/16 22:17*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/16/16 08:50*	*02/20/16 22:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 134*	*02/16/16 08:50*	*02/20/16 22:17*	*1*
Toluene-d8 (Surr)	*107*		*75 - 122*	*02/16/16 08:50*	*02/20/16 22:17*	*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	☼	02/19/16 07:12	02/26/16 15:47	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1

Client Sample ID: 3011-39-B01 (0-1)D
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-10
Matrix: Solid
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	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,4-Dichlorophenol	<0.37		0.37	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2-Nitroaniline	<0.18		0.18	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2-Chloronaphthalene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Acenaphthene	<0.037		0.037	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Phenanthrene	**0.044**		0.037	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Anthracene	**0.0093**	**J**	0.037	0.0061	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Fluoranthene	**0.069**		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Pyrene	**0.17**		0.037	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Benzo[a]anthracene	**0.057**		0.037	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1

Client Sample ID: 3011-39-B01 (0-1)D
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-10
Matrix: Solid
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.078**		0.037	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.052	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Benzo[b]fluoranthene	**0.12**		0.037	0.0079	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Benzo[k]fluoranthene	**0.050**		0.037	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Benzo[a]pyrene	**0.074**		0.037	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Indeno[1,2,3-cd]pyrene	**0.059**		0.037	0.0095	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
Benzo[g,h,i]perylene	**0.087**		0.037	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*80*		*25 - 110*	*02/19/16 07:12*	*02/26/16 15:47*	*1*
Phenol-d5	*77*		*31 - 110*	*02/19/16 07:12*	*02/26/16 15:47*	*1*
Nitrobenzene-d5	*69*		*25 - 115*	*02/19/16 07:12*	*02/26/16 15:47*	*1*
2-Fluorobiphenyl	*74*		*25 - 119*	*02/19/16 07:12*	*02/26/16 15:47*	*1*
2,4,6-Tribromophenol	*89*		*35 - 137*	*02/19/16 07:12*	*02/26/16 15:47*	*1*
Terphenyl-d14	*201*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 15:47*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.53**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Arsenic	**3.4**		0.55	0.25	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Barium	**56**		0.55	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Beryllium	**0.24**		0.22	0.048	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Boron	**7.3**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Cadmium	**0.17**		0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Calcium	**130000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 14:05	10
Chromium	**11**	**B**	0.55	0.095	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Cobalt	**4.5**		0.28	0.062	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Copper	**11**		0.55	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Iron	**7700**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Lead	**69**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Magnesium	**70000**		55	22	mg/Kg	☼	02/21/16 17:45	02/25/16 14:05	10
Manganese	**420**		0.55	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Nickel	**9.8**		0.55	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Potassium	**560**		28	4.5	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Selenium	**0.61**		0.55	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Silver	<0.28		0.28	0.064	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Sodium	**2100**		55	7.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Vanadium	**13**		0.28	0.080	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	1
Zinc	**54**		1.1	0.35	mg/Kg	☼	02/21/16 17:45	02/24/16 21:33	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		02/22/16 09:43	02/23/16 03:46	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 03:46	1
Boron	**0.073**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:46	1

Client Sample ID: 3011-39-B01 (0-1)D
Date Collected: 02/15/16 12:40
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-10
Matrix: Solid
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		02/22/16 09:43	02/23/16 03:46	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:46	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:46	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 03:46	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 03:46	1
Manganese	**1.0**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:46	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:46	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 03:46	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:46	1
Zinc	**0.051**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 03:46	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		02/22/16 09:48	02/24/16 01:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		02/22/16 09:43	02/23/16 13:53	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:53	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:22	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.017**		0.017	0.0091	mg/Kg	☼	02/19/16 16:00	02/22/16 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.36**		0.200	0.200	SU			02/19/16 21:20	1

Client Sample ID: 3011-39-B02 (0-1)
Date Collected: 02/15/16 12:50
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-11
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0034	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Benzene	<0.0044		0.0044	0.00098	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Bromodichloromethane	<0.0044		0.0044	0.00075	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Bromoform	<0.0044		0.0044	0.00090	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Carbon tetrachloride	<0.0044		0.0044	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Chloroethane	<0.0044		0.0044	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Chloroform	<0.0044		0.0044	0.00086	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Chloromethane	<0.0044	*	0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00090	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Dibromochloromethane	<0.0044		0.0044	0.00051	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,1-Dichloroethane	<0.0044		0.0044	0.00091	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,2-Dichloroethane	<0.0044		0.0044	0.00066	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,2-Dichloropropane	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,3-Dichloropropene, Total	<0.0044		0.0044	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Methylene Chloride	<0.0044		0.0044	0.0034	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00091	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00070	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Tetrachloroethene	<0.0044		0.0044	0.00092	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00086	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Vinyl acetate	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Vinyl chloride	<0.0044		0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1
Xylenes, Total	<0.0089		0.0089	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/16/16 08:50*	*02/20/16 22:43*	*1*
Dibromofluoromethane	*96*		*75 - 120*	*02/16/16 08:50*	*02/20/16 22:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 134*	*02/16/16 08:50*	*02/20/16 22:43*	*1*
Toluene-d8 (Surr)	*106*		*75 - 122*	*02/16/16 08:50*	*02/20/16 22:43*	*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	☼	02/19/16 07:12	02/26/16 16:15	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
1,4-Dichlorobenzene	<0.19		0.19	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1

Client Sample ID: 3011-39-B02 (0-1)
Date Collected: 02/15/16 12:50
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-11
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2-Methylphenol	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Isophorone	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2-Methylnaphthalene	<0.037		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Acenaphthene	<0.037		0.037	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Hexachlorobenzene	<0.074		0.074	0.0086	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Phenanthrene	**0.059**		0.037	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Anthracene	**0.012**	**J**	0.037	0.0062	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Carbazole	<0.19		0.19	0.092	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Fluoranthene	**0.12**		0.037	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Pyrene	**0.29**		0.037	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Butyl benzyl phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Benzo[a]anthracene	**0.083**		0.037	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1

Client Sample ID: 3011-39-B02 (0-1)
Date Collected: 02/15/16 12:50
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-11
Matrix: Solid
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.13**		0.037	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Di-n-octyl phthalate	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Benzo[b]fluoranthene	**0.20**		0.037	0.0080	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Benzo[k]fluoranthene	**0.094**		0.037	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Benzo[a]pyrene	**0.11**		0.037	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Indeno[1,2,3-cd]pyrene	**0.12**		0.037	0.0096	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
Benzo[g,h,i]perylene	**0.14**		0.037	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*82*		*25 - 110*	*02/19/16 07:12*	*02/26/16 16:15*	*1*
Phenol-d5	*80*		*31 - 110*	*02/19/16 07:12*	*02/26/16 16:15*	*1*
Nitrobenzene-d5	*72*		*25 - 115*	*02/19/16 07:12*	*02/26/16 16:15*	*1*
2-Fluorobiphenyl	*79*		*25 - 119*	*02/19/16 07:12*	*02/26/16 16:15*	*1*
2,4,6-Tribromophenol	*88*		*35 - 137*	*02/19/16 07:12*	*02/26/16 16:15*	*1*
Terphenyl-d14	*202*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 16:15*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.43**	**J**	1.0	0.22	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Arsenic	**6.4**		0.52	0.24	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Barium	**66**		0.52	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Beryllium	**0.46**		0.21	0.045	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Boron	**3.3**		2.6	0.37	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Cadmium	<0.10		0.10	0.030	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Calcium	**30000**		10	3.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Chromium	**11**	**B**	0.52	0.090	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Cobalt	**11**		0.26	0.059	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Copper	**13**		0.52	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Iron	**13000**		10	4.0	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Lead	**18**		0.26	0.13	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Magnesium	**20000**		5.2	2.1	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Manganese	**370**		0.52	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Nickel	**16**		0.52	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Potassium	**700**		26	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Selenium	**0.37**	**J**	0.52	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Silver	<0.26		0.26	0.061	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Sodium	**2400**		52	6.9	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Vanadium	**20**		0.26	0.076	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1
Zinc	**49**		1.0	0.33	mg/Kg	☼	02/21/16 17:45	02/24/16 21:38	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.52**		0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:53	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 03:53	1
Boron	**0.070**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 03:53	1

Client Sample ID: 3011-39-B02 (0-1)
Date Collected: 02/15/16 12:50
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-11
Matrix: Solid
Percent Solids: 87.5

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		02/22/16 09:43	02/23/16 03:53	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:53	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:53	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 03:53	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 03:53	1
Manganese	**3.3**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:53	1
Nickel	**0.013**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:53	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 03:53	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 03:53	1
Zinc	**0.048**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 03:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1.2**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 01:19	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		02/22/16 09:43	02/23/16 13:57	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 13:57	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		02/22/16 15:15	02/23/16 12:24	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.013**	**J**	0.017	0.0087	mg/Kg	☼	02/19/16 16:00	02/22/16 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.77**		0.200	0.200	SU			02/18/16 20:03	1

Client Sample ID: 3011-39-B03 (0-1)
Date Collected: 02/15/16 12:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-12
Matrix: Solid
Percent Solids: 87.2

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	☼	02/16/16 08:50	02/20/16 23:08	1
Benzene	<0.0046		0.0046	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Bromodichloromethane	<0.0046		0.0046	0.00078	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Bromoform	<0.0046		0.0046	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
2-Butanone (MEK)	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Carbon disulfide	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Carbon tetrachloride	<0.0046		0.0046	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Chlorobenzene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Chloroethane	<0.0046		0.0046	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Chloroform	<0.0046		0.0046	0.00091	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Chloromethane	<0.0046	*	0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
cis-1,2-Dichloroethene	<0.0046		0.0046	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
cis-1,3-Dichloropropene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Dibromochloromethane	<0.0046		0.0046	0.00053	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,1-Dichloroethane	<0.0046		0.0046	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,2-Dichloroethane	<0.0046		0.0046	0.00069	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,1-Dichloroethene	<0.0046		0.0046	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,2-Dichloropropane	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,3-Dichloropropene, Total	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Ethylbenzene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Methylene Chloride	<0.0046		0.0046	0.0035	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.00096	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Methyl tert-butyl ether	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Styrene	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,1,2,2-Tetrachloroethane	<0.0046		0.0046	0.00074	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Tetrachloroethene	<0.0046		0.0046	0.00097	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Toluene	<0.0046		0.0046	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
trans-1,2-Dichloroethene	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
trans-1,3-Dichloropropene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,1,1-Trichloroethane	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
1,1,2-Trichloroethane	<0.0046		0.0046	0.00090	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Trichloroethene	<0.0046		0.0046	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Vinyl acetate	<0.0046		0.0046	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Vinyl chloride	<0.0046		0.0046	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1
Xylenes, Total	<0.0093		0.0093	0.0017	mg/Kg	☼	02/16/16 08:50	02/20/16 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/16/16 08:50*	*02/20/16 23:08*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/16/16 08:50*	*02/20/16 23:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 134*	*02/16/16 08:50*	*02/20/16 23:08*	*1*
Toluene-d8 (Surr)	*107*		*75 - 122*	*02/16/16 08:50*	*02/20/16 23:08*	*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	☼	02/19/16 07:12	02/26/16 16:44	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1

Client Sample ID: 3011-39-B03 (0-1)
Date Collected: 02/15/16 12:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-12
Matrix: Solid
Percent Solids: 87.2

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	☼	02/19/16 07:12	02/26/16 16:44	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,4,5-Trichlorophenol	<0.38		0.38	0.086	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2-Methylnaphthalene	<0.038		0.038	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,4-Dinitrophenol	<0.76		0.76	0.67	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Fluorene	**0.0057**	**J**	0.038	0.0053	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Hexachlorobenzene	<0.076		0.076	0.0088	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Phenanthrene	**0.13**		0.038	0.0053	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Anthracene	**0.024**	**J**	0.038	0.0063	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Fluoranthene	**0.27**		0.038	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Pyrene	**0.61**		0.038	0.0075	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Butyl benzyl phthalate	**0.081**	**J**	0.19	0.072	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Benzo[a]anthracene	**0.19**		0.038	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1

Client Sample ID: 3011-39-B03 (0-1)
Date Collected: 02/15/16 12:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-12
Matrix: Solid
Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.25**		0.038	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Benzo[b]fluoranthene	**0.42**		0.038	0.0082	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Benzo[k]fluoranthene	**0.19**		0.038	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Benzo[a]pyrene	**0.25**		0.038	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Indeno[1,2,3-cd]pyrene	**0.18**		0.038	0.0098	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
Benzo[g,h,i]perylene	**0.19**		0.038	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*80*		*25 - 110*	*02/19/16 07:12*	*02/26/16 16:44*	*1*
Phenol-d5	*80*		*31 - 110*	*02/19/16 07:12*	*02/26/16 16:44*	*1*
Nitrobenzene-d5	*70*		*25 - 115*	*02/19/16 07:12*	*02/26/16 16:44*	*1*
2-Fluorobiphenyl	*77*		*25 - 119*	*02/19/16 07:12*	*02/26/16 16:44*	*1*
2,4,6-Tribromophenol	*100*		*35 - 137*	*02/19/16 07:12*	*02/26/16 16:44*	*1*
Terphenyl-d14	*201*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 16:44*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.43**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Arsenic	**2.5**		0.56	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Barium	**22**		0.56	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Beryllium	**0.16**	**J**	0.22	0.048	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Boron	**9.6**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Cadmium	**0.16**		0.11	0.032	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Calcium	**150000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 14:09	10
Chromium	**8.7**	**B**	0.56	0.096	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Cobalt	**3.2**		0.28	0.063	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Copper	**9.7**		0.56	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Iron	**7400**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Lead	**57**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Magnesium	**93000**		56	23	mg/Kg	☼	02/21/16 17:45	02/25/16 14:09	10
Manganese	**330**		0.56	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Nickel	**7.4**		0.56	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Potassium	**520**		28	4.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Silver	<0.28		0.28	0.065	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Sodium	**1300**		56	7.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Thallium	<0.56		0.56	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Vanadium	**9.2**		0.28	0.082	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	1
Zinc	**44**		1.1	0.35	mg/Kg	☼	02/21/16 17:45	02/24/16 21:43	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		02/22/16 09:43	02/23/16 04:00	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 04:00	1
Boron	**0.063**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:00	1

Client Sample ID: 3011-39-B03 (0-1)
Date Collected: 02/15/16 12:55
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-12
Matrix: Solid
Percent Solids: 87.2

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		02/22/16 09:43	02/23/16 04:00	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:00	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:00	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 04:00	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 04:00	1
Manganese	**1.2**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:00	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:00	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 04:00	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:00	1
Zinc	**0.081**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 04:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.67**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 01:26	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		02/22/16 09:43	02/23/16 14:01	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 14:01	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		02/22/16 15:15	02/23/16 12:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.014**	**J**	0.017	0.0087	mg/Kg	☼	02/19/16 16:00	02/22/16 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.58**		0.200	0.200	SU			02/18/16 20:09	1

Client Sample ID: 3011-39-B05 (0-1)
Date Collected: 02/15/16 13:20
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-13
Matrix: Solid
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.045**		0.018	0.0034	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Benzene	<0.0045		0.0045	0.00099	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Bromodichloromethane	<0.0045		0.0045	0.00075	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Bromoform	<0.0045		0.0045	0.00091	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Bromomethane	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
2-Butanone (MEK)	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Carbon disulfide	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Carbon tetrachloride	<0.0045		0.0045	0.00095	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Chlorobenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Chloroethane	<0.0045		0.0045	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Chloroform	<0.0045		0.0045	0.00087	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Chloromethane	<0.0045	*	0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
cis-1,2-Dichloroethene	<0.0045		0.0045	0.00091	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
cis-1,3-Dichloropropene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Dibromochloromethane	<0.0045		0.0045	0.00051	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,1-Dichloroethane	<0.0045		0.0045	0.00092	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,2-Dichloroethane	<0.0045		0.0045	0.00066	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,1-Dichloroethene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,2-Dichloropropane	<0.0045		0.0045	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,3-Dichloropropene, Total	<0.0045		0.0045	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Ethylbenzene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Methylene Chloride	<0.0045		0.0045	0.0034	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.00092	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Methyl tert-butyl ether	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Styrene	<0.0045		0.0045	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,1,2,2-Tetrachloroethane	<0.0045		0.0045	0.00071	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Tetrachloroethene	<0.0045		0.0045	0.00093	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Toluene	<0.0045		0.0045	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
trans-1,2-Dichloroethene	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
trans-1,3-Dichloropropene	<0.0045		0.0045	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,1,1-Trichloroethane	<0.0045		0.0045	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
1,1,2-Trichloroethane	<0.0045		0.0045	0.00086	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Trichloroethene	<0.0045		0.0045	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Vinyl acetate	<0.0045		0.0045	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Vinyl chloride	<0.0045		0.0045	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1
Xylenes, Total	<0.0089		0.0089	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 122*	*02/16/16 08:50*	*02/20/16 23:33*	*1*
Dibromofluoromethane	*98*		*75 - 120*	*02/16/16 08:50*	*02/20/16 23:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 134*	*02/16/16 08:50*	*02/20/16 23:33*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/16/16 08:50*	*02/20/16 23:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1

Client Sample ID: 3011-39-B05 (0-1)
Date Collected: 02/15/16 13:20
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-13
Matrix: Solid
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	<0.19		0.19	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Hexachlorocyclopentadiene	<0.75		0.75	0.22	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2-Methylnaphthalene	<0.037		0.037	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4-Nitrophenol	<0.75		0.75	0.36	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Hexachlorobenzene	<0.075		0.075	0.0087	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Phenanthrene	**0.052**		0.037	0.0052	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Anthracene	**0.0094**	**J**	0.037	0.0063	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Fluoranthene	**0.077**		0.037	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Pyrene	**0.19**		0.037	0.0074	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Benzo[a]anthracene	**0.054**		0.037	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1

Client Sample ID: 3011-39-B05 (0-1)
Date Collected: 02/15/16 13:20
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-13
Matrix: Solid
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.073**		0.037	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Benzo[b]fluoranthene	**0.11**		0.037	0.0081	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Benzo[k]fluoranthene	**0.052**		0.037	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Benzo[a]pyrene	**0.072**		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Indeno[1,2,3-cd]pyrene	**0.061**		0.037	0.0097	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
Benzo[g,h,i]perylene	**0.077**		0.037	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*76*		*25 - 110*	*02/19/16 07:12*	*02/26/16 17:12*	*1*
Phenol-d5	*75*		*31 - 110*	*02/19/16 07:12*	*02/26/16 17:12*	*1*
Nitrobenzene-d5	*67*		*25 - 115*	*02/19/16 07:12*	*02/26/16 17:12*	*1*
2-Fluorobiphenyl	*74*		*25 - 119*	*02/19/16 07:12*	*02/26/16 17:12*	*1*
2,4,6-Tribromophenol	*66*		*35 - 137*	*02/19/16 07:12*	*02/26/16 17:12*	*1*
Terphenyl-d14	*194*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 17:12*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.54**	**J**	1.1	0.24	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Arsenic	**5.5**		0.57	0.27	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Barium	**56**		0.57	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Beryllium	**0.38**		0.23	0.050	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Boron	**6.5**		2.9	0.40	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Cadmium	**0.18**		0.11	0.033	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Calcium	**100000**		110	37	mg/Kg	☼	02/21/16 17:45	02/25/16 14:13	10
Chromium	**9.5**	**B**	0.57	0.099	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Cobalt	**5.3**		0.29	0.065	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Copper	**20**		0.57	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Iron	**11000**		11	4.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Lead	**46**		0.29	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Magnesium	**48000**		5.7	2.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Manganese	**380**		0.57	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Nickel	**12**		0.57	0.16	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Potassium	**700**		29	4.7	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Selenium	**0.59**		0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Silver	<0.29		0.29	0.067	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Sodium	**1700**		57	7.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Vanadium	**17**		0.29	0.084	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	1
Zinc	**54**		1.1	0.36	mg/Kg	☼	02/21/16 17:45	02/24/16 21:48	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		02/22/16 09:43	02/23/16 04:07	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 04:07	1
Boron	**0.12**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:07	1

Client Sample ID: 3011-39-B05 (0-1)
Date Collected: 02/15/16 13:20
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-13
Matrix: Solid
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		02/22/16 09:43	02/23/16 04:07	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:07	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:07	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 04:07	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 04:07	1
Manganese	**4.0**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:07	1
Nickel	**0.015**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:07	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 04:07	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:07	1
Zinc	**0.075**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 04:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.39**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 01:33	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		02/22/16 09:43	02/23/16 14:05	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 14:05	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		02/22/16 15:15	02/23/16 12:32	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.012**	**J**	0.018	0.0093	mg/Kg	☼	02/19/16 16:00	02/22/16 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.28**		0.200	0.200	SU			02/18/16 20:16	1

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.

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: 500-107595-2

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

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

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

Chain of Custody Record

Lab Job #: 500-107595
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341-OUUE-01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 500UEL4
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/Corrosivity					Comments
7		3011-39-B06 (0-1)	2-15-16	1105	2	S	X	X	X	X	X					
8		3011-39-B04 (0-1)	2-15-16	1115	2	S	X	X	X	X	X					
9		3011-39-B01 (0-1)	2-15-16	1240	2	S	X	X	X	X	X					
10		3011-39-B01 (0-1) D	2-15-16	1240	2	S	X	X	X	X	X					
11		3011-39-B02 (0-1)	2-15-16	1250	2	S	X	X	X	X	X					
12		3011-39-B03 (0-1)	2-15-16	1255	2	S	X	X	X	X	X					
13		3011-39-B05 (0-1)	2-15-16	1320	2	S	X	X	X	X	X					

2-15-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-15-16	1540	[signature]	TA	2/15/16	1540
[signature]	TA	2/15/16	1710	[signature]	TA-CHI	2/16/16	0800

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: 500-107595-2

Login Number: 107595
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9,2.7,3.0,2.4,3.2
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	

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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: 500-107595-3
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:
2/29/2016 4:27:30 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

Table of Contents

Job ID: 500-107595-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107595-3

Comments
No additional comments.

Receipt
The samples were received on 2/16/2016 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 2.4º C, 2.7º C, 2.9º C, 3.0º C and 3.2º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323718 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for batch 500-323718 recovered outside control limits for the following analyte: Chloromethane. This analyte was biased high in the LCS 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 one base/neutral surrogate outside acceptance limits: 3011-40-B01 (0-1) (500-107595-14), 3011-40-B02 (0-1) (500-107595-15), (500-107595-E-1-A), (500-107595-E-1-B MS) and (500-107595-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 500-323833 and analytical batch 500-324356 contained Chromium above the reporting limit (RL). Associated samples 3011-40-B01 (0-1) (500-107595-14) and (500-107595-E-1-J) 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 following samples was diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-40-B02 (0-1) (500-107595-15). 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.

Client Sample ID: 3011-40-B02 (0-1)

Lab Sample ID: 500-107595-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.038		0.019	0.0037	mg/Kg	1	☼	8260B	Total/NA
Naphthalene	0.015	J	0.036	0.0055	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0074	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.015	J	0.036	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.022	J	0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.24		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.061		0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.21		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.48		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 500-107595-3

Client Sample ID: 3011-40-B02 (0-1) (Continued)

Lab Sample ID: 500-107595-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Butyl benzyl phthalate	0.12	J	0.18	0.068	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		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	0.23		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.099		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.16		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11		0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.8		2.9	1.3	mg/Kg	5	☼	6010B	Total/NA
Barium	60		2.9	0.52	mg/Kg	5	☼	6010B	Total/NA
Beryllium	0.39	J	1.1	0.25	mg/Kg	5	☼	6010B	Total/NA
Boron	8.8		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.33	J	0.57	0.17	mg/Kg	5	☼	6010B	Total/NA
Calcium	130000		57	18	mg/Kg	5	☼	6010B	Total/NA
Chromium	9.4	B	2.9	0.49	mg/Kg	5	☼	6010B	Total/NA
Cobalt	4.0		1.4	0.32	mg/Kg	5	☼	6010B	Total/NA
Copper	13		2.9	0.62	mg/Kg	5	☼	6010B	Total/NA
Iron	8500		57	22	mg/Kg	5	☼	6010B	Total/NA
Lead	47		1.4	0.71	mg/Kg	5	☼	6010B	Total/NA
Magnesium	74000		29	12	mg/Kg	5	☼	6010B	Total/NA
Manganese	540		2.9	0.57	mg/Kg	5	☼	6010B	Total/NA
Nickel	7.8		2.9	0.78	mg/Kg	5	☼	6010B	Total/NA
Potassium	900		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500		57	7.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.29	0.084	mg/Kg	1	☼	6010B	Total/NA
Zinc	43		5.7	1.8	mg/Kg	5	☼	6010B	Total/NA
Barium	0.51		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.067	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.020	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	5.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.082	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.017	0.0087	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.

Sample Summary

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

TestAmerica Job ID: 500-107595-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107595-15	3011-40-B02 (0-1)	Solid	02/15/16 13:15	02/16/16 08:00

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.038		0.019	0.0037	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Benzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Bromodichloromethane	<0.0047		0.0047	0.00080	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Bromoform	<0.0047		0.0047	0.00097	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Bromomethane	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
2-Butanone (MEK)	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Carbon disulfide	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Carbon tetrachloride	<0.0047		0.0047	0.0010	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chlorobenzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chloroethane	<0.0047		0.0047	0.0020	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chloroform	<0.0047		0.0047	0.00092	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chloromethane	<0.0047	*	0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
cis-1,2-Dichloroethene	<0.0047		0.0047	0.00097	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
cis-1,3-Dichloropropene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Dibromochloromethane	<0.0047		0.0047	0.00054	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1-Dichloroethane	<0.0047		0.0047	0.00098	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,2-Dichloroethane	<0.0047		0.0047	0.00070	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1-Dichloroethene	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,2-Dichloropropane	<0.0047		0.0047	0.0012	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,3-Dichloropropene, Total	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Ethylbenzene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Methylene Chloride	<0.0047		0.0047	0.0036	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.00098	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Methyl tert-butyl ether	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Styrene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1,2,2-Tetrachloroethane	<0.0047		0.0047	0.00075	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Tetrachloroethene	<0.0047		0.0047	0.00098	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Toluene	<0.0047		0.0047	0.0016	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
trans-1,2-Dichloroethene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
trans-1,3-Dichloropropene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1,1-Trichloroethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1,2-Trichloroethane	<0.0047		0.0047	0.00092	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Trichloroethene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Vinyl acetate	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Vinyl chloride	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/16/16 08:50*	*02/21/16 00:24*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/16/16 08:50*	*02/21/16 00:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 134*	*02/16/16 08:50*	*02/21/16 00:24*	*1*
Toluene-d8 (Surr)	*109*		*75 - 122*	*02/16/16 08:50*	*02/21/16 00:24*	*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	☼	02/19/16 07:12	02/26/16 18:09	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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	☼	02/19/16 07:12	02/26/16 18:09	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Naphthalene	**0.015**	**J**	0.036	0.0055	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Methylnaphthalene	**0.0074**	**J**	0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Acenaphthene	**0.015**	**J**	0.036	0.0065	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Fluorene	**0.022**	**J**	0.036	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Pentachlorophenol	<0.72		0.72	0.58	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Phenanthrene	**0.24**		0.036	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Anthracene	**0.061**		0.036	0.0060	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Fluoranthene	**0.21**		0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Pyrene	**0.48**		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Butyl benzyl phthalate	**0.12**	**J**	0.18	0.068	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[a]anthracene	**0.15**		0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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	☼	02/19/16 07:12	02/26/16 18:09	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[b]fluoranthene	**0.23**		0.036	0.0078	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[k]fluoranthene	**0.099**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[a]pyrene	**0.16**		0.036	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Indeno[1,2,3-cd]pyrene	**0.11**		0.036	0.0093	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[g,h,i]perylene	**0.12**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
Phenol-d5	*80*		*31 - 110*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
Nitrobenzene-d5	*70*		*25 - 115*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
2-Fluorobiphenyl	*75*		*25 - 119*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
2,4,6-Tribromophenol	*75*		*35 - 137*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
Terphenyl-d14	*208*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 18:09*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<5.7		5.7	1.2	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Arsenic	**3.8**		2.9	1.3	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Barium	**60**		2.9	0.52	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Beryllium	**0.39**	**J**	1.1	0.25	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Boron	**8.8**		2.9	0.40	mg/Kg	☼	02/21/16 17:45	02/25/16 10:52	1
Cadmium	**0.33**	**J**	0.57	0.17	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Calcium	**130000**		57	18	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Chromium	**9.4**	**B**	2.9	0.49	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Cobalt	**4.0**		1.4	0.32	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Copper	**13**		2.9	0.62	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Iron	**8500**		57	22	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Lead	**47**		1.4	0.71	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Magnesium	**74000**		29	12	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Manganese	**540**		2.9	0.57	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Nickel	**7.8**		2.9	0.78	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Potassium	**900**		29	4.7	mg/Kg	☼	02/21/16 17:45	02/25/16 10:52	1
Selenium	<2.9		2.9	1.4	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Silver	<1.4		1.4	0.33	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Sodium	**1500**		57	7.6	mg/Kg	☼	02/21/16 17:45	02/25/16 10:52	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/25/16 14:29	1
Vanadium	**11**		0.29	0.084	mg/Kg	☼	02/21/16 17:45	02/25/16 14:29	1
Zinc	**43**		5.7	1.8	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.51**		0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 04:20	1
Boron	**0.067**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:20	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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		02/22/16 09:43	02/23/16 04:20	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Cobalt	**0.020**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 04:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 04:20	1
Manganese	**5.1**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Nickel	**0.015**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 04:20	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Zinc	**0.082**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 04:20	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		02/22/16 09:48	02/24/16 01:46	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		02/22/16 09:43	02/23/16 14:14	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 14:14	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		02/22/16 15:15	02/23/16 12:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.016**	**J**	0.017	0.0087	mg/Kg	☼	02/19/16 16:00	02/22/16 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.65**		0.200	0.200	SU			02/18/16 20:28	1

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.

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: 500-107595-3

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

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

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

Chain of Custody Record

Lab Job #: 500-107595

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler:

Client: EE

Client Project #: 1009341.0008-01

Project Name: IL 38

Project Location/State: Kane County, IL

Lab Project #: 500118ky

Sampler: S. Cooper

Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
14		Soil-40-D01 (0-1)	2-15-16	1305	2	S	X	X	X	X	X					
15		Soil-40-B02 (0-1)	2-15-16	1715	2	S	X	X	X	X	X					

2-15-16

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	Company	Date	Time	Received By	Company	Date	Time
[signature]	EE	2-15-16	1540	[signature]	TA	2/15/16	1540
[signature]	TA	2/15/16	1710	[signature]	TA-CHI	2/16/16	0800

Lab Courier: [signature]
Shipped:
Hand Delivered:

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

Client Comments

Lab Comments:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107595-3

Login Number: 107595
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9,2.7,3.0,2.4,3.2
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	

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: 500-107595-6
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:
2/29/2016 4:29:03 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

Table of Contents

Job ID: 500-107595-6

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107595-6

Comments
No additional comments.

Receipt
The samples were received on 2/16/2016 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 2.4º C, 2.7º C, 2.9º C, 3.0º C and 3.2º 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: (500-107595-E-1-A), (500-107595-E-1-B MS) and (500-107595-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 500-323833 and analytical batch 500-324356 contained Chromium above the reporting limit (RL). Associated samples 3011-44-B01 (0-1) (500-107595-18) and (500-107595-E-1-J) 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: 500-107595-6

Client Sample ID: 3011-44-B01 (0-1)

Lab Sample ID: 500-107595-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.019	J	0.036	0.0056	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.016	J	0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.018	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.026	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.31		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.060		0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.54		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.42		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.20		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.25		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.31		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.14		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.098		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.028	J	0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.10		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.48	J	1.1	0.24	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.6		0.57	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	67		0.57	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.39		0.23	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	4.9		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.45		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	71000		110	37	mg/Kg	10	☼	6010B	Total/NA
Chromium	11	B	0.57	0.098	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.0		0.29	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	14		0.57	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	12000		11	4.4	mg/Kg	1	☼	6010B	Total/NA
Lead	56		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	39000		57	23	mg/Kg	10	☼	6010B	Total/NA
Manganese	420		0.57	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	16		0.57	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	740		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.45	J	0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Sodium	2300		57	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.29	0.083	mg/Kg	1	☼	6010B	Total/NA
Zinc	160		11	3.6	mg/Kg	10	☼	6010B	Total/NA
Barium	0.57		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.079	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.68		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.029	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	2.8		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.021		0.019	0.0098	mg/Kg	1	☼	7471B	Total/NA
pH	8.42		0.200	0.200	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

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

TestAmerica Job ID: 500-107595-6

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107595-18	3011-44-B01 (0-1)	Solid	02/15/16 13:25	02/16/16 08:00

Client Sample ID: 3011-44-B01 (0-1)
Date Collected: 02/15/16 13:25
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-18
Matrix: Solid
Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0034	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Benzene	<0.0044		0.0044	0.00098	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Bromodichloromethane	<0.0044		0.0044	0.00074	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Bromoform	<0.0044		0.0044	0.00090	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
2-Butanone (MEK)	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Carbon disulfide	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Carbon tetrachloride	<0.0044		0.0044	0.00094	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Chlorobenzene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Chloroethane	<0.0044		0.0044	0.0018	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Chloroform	<0.0044		0.0044	0.00086	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Chloromethane	<0.0044		0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
cis-1,2-Dichloroethene	<0.0044		0.0044	0.00090	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
cis-1,3-Dichloropropene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Dibromochloromethane	<0.0044		0.0044	0.00051	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,1-Dichloroethane	<0.0044		0.0044	0.00091	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,2-Dichloroethane	<0.0044		0.0044	0.00065	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,1-Dichloroethene	<0.0044		0.0044	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,2-Dichloropropane	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,3-Dichloropropene, Total	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Ethylbenzene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Methylene Chloride	<0.0044		0.0044	0.0033	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.00091	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Methyl tert-butyl ether	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Styrene	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,1,2,2-Tetrachloroethane	<0.0044		0.0044	0.00070	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Tetrachloroethene	<0.0044		0.0044	0.00092	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Toluene	<0.0044		0.0044	0.0015	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
trans-1,2-Dichloroethene	<0.0044		0.0044	0.0011	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
trans-1,3-Dichloropropene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,1,1-Trichloroethane	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
1,1,2-Trichloroethane	<0.0044		0.0044	0.00085	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Trichloroethene	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Vinyl acetate	<0.0044		0.0044	0.0012	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Vinyl chloride	<0.0044		0.0044	0.0010	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1
Xylenes, Total	<0.0088		0.0088	0.0016	mg/Kg	☼	02/16/16 08:50	02/22/16 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 122*	*02/16/16 08:50*	*02/22/16 13:36*	*1*
Dibromofluoromethane	*93*		*75 - 120*	*02/16/16 08:50*	*02/22/16 13:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 134*	*02/16/16 08:50*	*02/22/16 13:36*	*1*
Toluene-d8 (Surr)	*104*		*75 - 122*	*02/16/16 08:50*	*02/22/16 13:36*	*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	☼	02/19/16 07:12	02/26/16 11:33	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1

Client Sample ID: 3011-44-B01 (0-1)
Date Collected: 02/15/16 13:25
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-18
Matrix: Solid
Percent Solids: 87.4

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	☼	02/19/16 07:12	02/26/16 11:33	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Naphthalene	**0.019**	**J**	0.036	0.0056	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,4,5-Trichlorophenol	<0.36		0.36	0.084	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2-Methylnaphthalene	**0.016**	**J**	0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2-Nitrophenol	<0.36		0.36	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Acenaphthene	**0.018**	**J**	0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Fluorene	**0.026**	**J**	0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Phenanthrene	**0.31**		0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Anthracene	**0.060**		0.036	0.0061	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Fluoranthene	**0.54**		0.036	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Pyrene	**0.42**		0.036	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Benzo[a]anthracene	**0.20**		0.036	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1

Client Sample ID: 3011-44-B01 (0-1)
Date Collected: 02/15/16 13:25
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-18
Matrix: Solid
Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.25**		0.036	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Benzo[b]fluoranthene	**0.31**		0.036	0.0079	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Benzo[k]fluoranthene	**0.14**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Benzo[a]pyrene	**0.21**		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Indeno[1,2,3-cd]pyrene	**0.098**		0.036	0.0095	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Dibenz(a,h)anthracene	**0.028**	**J**	0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
Benzo[g,h,i]perylene	**0.10**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 11:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*85*		*25 - 110*	*02/19/16 07:12*	*02/26/16 11:33*	*1*
Phenol-d5	*81*		*31 - 110*	*02/19/16 07:12*	*02/26/16 11:33*	*1*
Nitrobenzene-d5	*74*		*25 - 115*	*02/19/16 07:12*	*02/26/16 11:33*	*1*
2-Fluorobiphenyl	*77*		*25 - 119*	*02/19/16 07:12*	*02/26/16 11:33*	*1*
2,4,6-Tribromophenol	*68*		*35 - 137*	*02/19/16 07:12*	*02/26/16 11:33*	*1*
Terphenyl-d14	*103*		*36 - 134*	*02/19/16 07:12*	*02/26/16 11:33*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.48**	**J**	1.1	0.24	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Arsenic	**6.6**		0.57	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Barium	**67**		0.57	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Beryllium	**0.39**		0.23	0.049	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Boron	**4.9**		2.9	0.40	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Cadmium	**0.45**		0.11	0.033	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Calcium	**71000**		110	37	mg/Kg	☼	02/21/16 17:45	02/25/16 14:42	10
Chromium	**11**	**B**	0.57	0.098	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Cobalt	**7.0**		0.29	0.064	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Copper	**14**		0.57	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Iron	**12000**		11	4.4	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Lead	**56**		0.29	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Magnesium	**39000**		57	23	mg/Kg	☼	02/21/16 17:45	02/25/16 14:42	10
Manganese	**420**		0.57	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Nickel	**16**		0.57	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Potassium	**740**		29	4.7	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Selenium	**0.45**	**J**	0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Silver	<0.29		0.29	0.067	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Sodium	**2300**		57	7.5	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Vanadium	**18**		0.29	0.083	mg/Kg	☼	02/21/16 17:45	02/24/16 22:20	1
Zinc	**160**		11	3.6	mg/Kg	☼	02/21/16 17:45	02/25/16 14:42	10

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.57**		0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 04:56	1
Boron	**0.079**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:56	1

Client Sample ID: 3011-44-B01 (0-1)
Date Collected: 02/15/16 13:25
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-18
Matrix: Solid
Percent Solids: 87.4

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		02/22/16 09:43	02/23/16 04:56	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:56	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:56	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 04:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 04:56	1
Manganese	**0.68**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:56	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:56	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 04:56	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:56	1
Zinc	**0.029**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 04:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2.8**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 02:22	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		02/22/16 09:43	02/23/16 14:38	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 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		02/22/16 15:15	02/23/16 12:42	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.021**		0.019	0.0098	mg/Kg	☼	02/19/16 16:00	02/22/16 13:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.42**		0.200	0.200	SU			02/18/16 20:47	1

Definitions/Glossary

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

TestAmerica Job ID: 500-107595-6

Qualifiers

GC/MS Semi VOA

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

Metals

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

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: 500-107595-6

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 #: 500-107595
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0008.01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 50011864
Sampler: S. Cooper
Lab PM: D. Wright

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL Metals	TCLP/SPLP TAL Metals	pH/% Solids					Comments
18		Soil-44-B01(0-1)	2/15/16	1325	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

2-15-16

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
[signature]	EE	2-15-16	1540	P. Neal	TA	2/15/16	1540
P. Neal	TA	2/15/16	1710	Sherri Scott	TA-CHI	2/16/16	0800

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: 500-107595-6

Login Number: 107595
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9,2.7,3.0,2.4,3.2
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	

Illinois Environmental Protection Agency

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, inclduding number and street):
46W 007-159 IL 38 ISGS #3011-40 (4 Residences)

City: Maple Park State: IL Zip Code: 60151

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: 41.899346 (Decimal Degrees) Longitude: -88.509042 (-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

Project Name: FAP 347 (IL Route 38)

Latitude: 41.899346 Longitude: -88.509042

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 3011-40-B01 and B02 were sampled within the construction zone adjacent to ISGS #3011-40 (4 Residences). Refer to PSI Report for ISGS #3011-40 (4 Residences) including Table 4-4, and Figures 4-6A&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 J107595-3.

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:

LICENSED PROFESSIONAL ENGINEER
NEIL J. BROWN
062-055898
STATE OF ILLINOIS

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 #3011-40 (4 Residences)		Comparison Criteria			
BORING	3011-40-B01	3011-40-B02	MACs			TACO
SAMPLE	3011-40-B01 (0-1)	3011-40-B02 (0-1)				
MATRIX	Soil	Soil				
DEPTH (feet)	0-1	0-1	Most Stringent	Within an MSA	Within Chicago	SCGIER
pH	8.61	8.65				
VOCs (mg/kg)						
Acetone	ND U	**0.038**	25	--	--	--
SVOCs (mg/kg)						
2-Methylnaphthalene	ND U	**0.0074 J**	--	--	--	--
Acenaphthene	**0.0068 J**	**0.015 J**	570	--	--	--
Anthracene	ND U	**0.061**	12,000	--	--	--
Benzo[a]anthracene	**0.15**	**0.15**	0.9	1.8	1.1	--
Benzo[a]pyrene	**0.18** †	**0.16** †	0.09	2.1	1.3	--
Benzo[b]fluoranthene	**0.3**	**0.23**	0.9	2.1	1.5	--
Benzo[g,h,i]perylene	**0.21**	**0.12**	--	--	--	--
Benzo[k]fluoranthene	**0.14**	**0.099**	9	--	--	--
Butyl benzyl phthalate	ND U	**0.12 J**	930	--	--	--
Chrysene	**0.19**	**0.17**	88	--	--	--
Fluoranthene	**0.22**	**0.21**	3,100	--	--	--
Fluorene	**0.0081 J**	**0.022 J**	560	--	--	--
Indeno[1,2,3-cd]pyrene	**0.19**	**0.11**	0.9	1.6	0.9	--
Naphthalene	ND U	**0.015 J**	1.8	--	--	--
Phenanthrene	**0.14**	**0.24**	--	--	--	--
Pyrene	**0.52**	**0.48**	2,300	--	--	--
Inorganics (mg/kg)						
Antimony	**0.54 J**	ND U	5	--	--	--
Arsenic	**4.3**	**3.8**	11.3	13	--	--
Barium	**41**	**60**	1,500	--	--	--
Beryllium	**0.23**	**0.39 J**	22	--	--	--
Boron	**7.1**	**8.8**	40	--	--	--
Cadmium	**0.16**	**0.33 J**	5.2	--	--	--
Calcium	**110,000**	**130,000**	--	--	--	--
Chromium	**9.5**	**9.4**	21	--	--	--
Cobalt	**4.8**	**4**	20	--	--	--
Copper	**12**	**13**	2,900	--	--	--
Iron	**8,500**	**8,500**	15,000	15,900	--	--
Lead	**59**	**47**	107	--	--	--
Magnesium	**56,000**	**74,000**	325,000	--	--	--
Manganese	**420**	**540**	630	636	--	--
Mercury	ND U	**0.016 J**	0.89	--	--	--
Nickel	**9.6**	**7.8**	100	--	--	--
Potassium	**620**	**900**	--	--	--	--
Sodium	**1,400**	**1,500**	--	--	--	--
Vanadium	**12**	**11**	550	--	--	--
Zinc	**60**	**43**	5,100	--	--	--
TCLP Metals (mg/L)						
Barium	**0.26 J**	**0.51**	--	--	--	2
Boron	**0.063 J**	**0.067 J**	--	--	--	2
Cobalt	ND U	**0.02 J**	--	--	--	1
Manganese	**1.2 L**	**5.1 L**	--	--	--	0.15
Nickel	ND U	**0.015 J**	--	--	--	0.1
Zinc	**0.069 J**	**0.082 J**	--	--	--	5
SPLP Metals (mg/L)						
Manganese	**0.35 L**	**0.22 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: 500-107595-3
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:
2/29/2016 4:27:30 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

Table of Contents

Job ID: 500-107595-3

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-107595-3

Comments
No additional comments.

Receipt
The samples were received on 2/16/2016 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 2.4º C, 2.7º C, 2.9º C, 3.0º C and 3.2º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 500-323718 recovered above the upper control limit for Chloromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for batch 500-323718 recovered outside control limits for the following analyte: Chloromethane. This analyte was biased high in the LCS 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 one base/neutral surrogate outside acceptance limits: 3011-40-B01 (0-1) (500-107595-14), 3011-40-B02 (0-1) (500-107595-15), (500-107595-E-1-A), (500-107595-E-1-B MS) and (500-107595-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 500-323833 and analytical batch 500-324356 contained Chromium above the reporting limit (RL). Associated samples 3011-40-B01 (0-1) (500-107595-14) and (500-107595-E-1-J) 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 following samples was diluted to bring the concentration of target and non-target analytes within the calibration range: 3011-40-B02 (0-1) (500-107595-15). 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: 500-107595-3

Client Sample ID: 3011-40-B01 (0-1) — Lab Sample ID: 500-107595-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0068	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0081	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.22		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.52		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.19		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.30		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.14		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.19		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.21		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.54	J	1.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.3		0.56	0.26	mg/Kg	1	☼	6010B	Total/NA
Barium	41		0.56	0.10	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.23		0.22	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	7.1		2.8	0.39	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16		0.11	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000		110	36	mg/Kg	10	☼	6010B	Total/NA
Chromium	9.5	B	0.56	0.097	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.8		0.28	0.063	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.56	0.12	mg/Kg	1	☼	6010B	Total/NA
Iron	8500		11	4.3	mg/Kg	1	☼	6010B	Total/NA
Lead	59		0.28	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	56000		5.6	2.3	mg/Kg	1	☼	6010B	Total/NA
Manganese	420		0.56	0.11	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.6		0.56	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	620		28	4.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	1400		56	7.4	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.28	0.082	mg/Kg	1	☼	6010B	Total/NA
Zinc	60		1.1	0.36	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.063	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.069	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.35		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.61		0.200	0.200	SU	1		9045D	Total/NA

Client Sample ID: 3011-40-B02 (0-1) — Lab Sample ID: 500-107595-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.038		0.019	0.0037	mg/Kg	1	☼	8260B	Total/NA
Naphthalene	0.015	J	0.036	0.0055	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0074	J	0.036	0.0066	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.015	J	0.036	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.022	J	0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.24		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.061		0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.21		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.48		0.036	0.0071	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: 500-107595-3

Client Sample ID: 3011-40-B02 (0-1) (Continued)

Lab Sample ID: 500-107595-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Butyl benzyl phthalate	0.12	J	0.18	0.068	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.15		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	0.23		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.099		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.16		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11		0.036	0.0093	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	3.8		2.9	1.3	mg/Kg	5	☼	6010B	Total/NA
Barium	60		2.9	0.52	mg/Kg	5	☼	6010B	Total/NA
Beryllium	0.39	J	1.1	0.25	mg/Kg	5	☼	6010B	Total/NA
Boron	8.8		2.9	0.40	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.33	J	0.57	0.17	mg/Kg	5	☼	6010B	Total/NA
Calcium	130000		57	18	mg/Kg	5	☼	6010B	Total/NA
Chromium	9.4	B	2.9	0.49	mg/Kg	5	☼	6010B	Total/NA
Cobalt	4.0		1.4	0.32	mg/Kg	5	☼	6010B	Total/NA
Copper	13		2.9	0.62	mg/Kg	5	☼	6010B	Total/NA
Iron	8500		57	22	mg/Kg	5	☼	6010B	Total/NA
Lead	47		1.4	0.71	mg/Kg	5	☼	6010B	Total/NA
Magnesium	74000		29	12	mg/Kg	5	☼	6010B	Total/NA
Manganese	540		2.9	0.57	mg/Kg	5	☼	6010B	Total/NA
Nickel	7.8		2.9	0.78	mg/Kg	5	☼	6010B	Total/NA
Potassium	900		29	4.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	1500		57	7.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.29	0.084	mg/Kg	1	☼	6010B	Total/NA
Zinc	43		5.7	1.8	mg/Kg	5	☼	6010B	Total/NA
Barium	0.51		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.067	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.020	J	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	5.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.082	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.017	0.0087	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.

Sample Summary

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

TestAmerica Job ID: 500-107595-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-107595-14	3011-40-B01 (0-1)	Solid	02/15/16 13:05	02/16/16 08:00
500-107595-15	3011-40-B02 (0-1)	Solid	02/15/16 13:15	02/16/16 08:00

Client Sample ID: 3011-40-B01 (0-1)
Date Collected: 02/15/16 13:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-14
Matrix: Solid
Percent Solids: 86.9

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	☼	02/16/16 08:50	02/20/16 23:59	1
Benzene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Bromodichloromethane	<0.0053		0.0053	0.00089	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Bromoform	<0.0053		0.0053	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Bromomethane	<0.0053		0.0053	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
2-Butanone (MEK)	<0.0053		0.0053	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Carbon disulfide	<0.0053		0.0053	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Carbon tetrachloride	<0.0053		0.0053	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Chlorobenzene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Chloroethane	<0.0053		0.0053	0.0022	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Chloroform	<0.0053		0.0053	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Chloromethane	<0.0053	*	0.0053	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
cis-1,2-Dichloroethene	<0.0053		0.0053	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
cis-1,3-Dichloropropene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Dibromochloromethane	<0.0053		0.0053	0.00061	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,1-Dichloroethane	<0.0053		0.0053	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,2-Dichloroethane	<0.0053		0.0053	0.00078	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,1-Dichloroethene	<0.0053		0.0053	0.0019	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,2-Dichloropropane	<0.0053		0.0053	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,3-Dichloropropene, Total	<0.0053		0.0053	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Ethylbenzene	<0.0053		0.0053	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
2-Hexanone	<0.0053		0.0053	0.0016	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Methylene Chloride	<0.0053		0.0053	0.0040	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
4-Methyl-2-pentanone (MIBK)	<0.0053		0.0053	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Methyl tert-butyl ether	<0.0053		0.0053	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Styrene	<0.0053		0.0053	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,1,2,2-Tetrachloroethane	<0.0053		0.0053	0.00084	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Tetrachloroethene	<0.0053		0.0053	0.0011	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Toluene	<0.0053		0.0053	0.0018	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
trans-1,2-Dichloroethene	<0.0053		0.0053	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
trans-1,3-Dichloropropene	<0.0053		0.0053	0.0015	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,1,1-Trichloroethane	<0.0053		0.0053	0.0012	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
1,1,2-Trichloroethane	<0.0053		0.0053	0.0010	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Trichloroethene	<0.0053		0.0053	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Vinyl acetate	<0.0053		0.0053	0.0014	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Vinyl chloride	<0.0053		0.0053	0.0013	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1
Xylenes, Total	<0.011		0.011	0.0020	mg/Kg	☼	02/16/16 08:50	02/20/16 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/16/16 08:50*	*02/20/16 23:59*	*1*
Dibromofluoromethane	*91*		*75 - 120*	*02/16/16 08:50*	*02/20/16 23:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 134*	*02/16/16 08:50*	*02/20/16 23:59*	*1*
Toluene-d8 (Surr)	*108*		*75 - 122*	*02/16/16 08:50*	*02/20/16 23:59*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1

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

TestAmerica Job ID: 500-107595-3

Client Sample ID: 3011-40-B01 (0-1)
Date Collected: 02/15/16 13:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-14
Matrix: Solid
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	<0.18		0.18	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2-Methylnaphthalene	<0.036		0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Acenaphthene	**0.0068**	**J**	0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Fluorene	**0.0081**	**J**	0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Phenanthrene	**0.14**		0.036	0.0051	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Fluoranthene	**0.22**		0.036	0.0068	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Pyrene	**0.52**		0.036	0.0073	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Benzo[a]anthracene	**0.15**		0.036	0.0049	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1

Client Sample ID: 3011-40-B01 (0-1)
Date Collected: 02/15/16 13:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-14
Matrix: Solid
Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.19**		0.036	0.010	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Benzo[b]fluoranthene	**0.30**		0.036	0.0079	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Benzo[k]fluoranthene	**0.14**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Benzo[a]pyrene	**0.18**		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Indeno[1,2,3-cd]pyrene	**0.19**		0.036	0.0095	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
Benzo[g,h,i]perylene	**0.21**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*77*		*25 - 110*	*02/19/16 07:12*	*02/26/16 17:40*	*1*
Phenol-d5	*75*		*31 - 110*	*02/19/16 07:12*	*02/26/16 17:40*	*1*
Nitrobenzene-d5	*66*		*25 - 115*	*02/19/16 07:12*	*02/26/16 17:40*	*1*
2-Fluorobiphenyl	*72*		*25 - 119*	*02/19/16 07:12*	*02/26/16 17:40*	*1*
2,4,6-Tribromophenol	*76*		*35 - 137*	*02/19/16 07:12*	*02/26/16 17:40*	*1*
Terphenyl-d14	*193*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 17:40*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.54**	**J**	1.1	0.23	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Arsenic	**4.3**		0.56	0.26	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Barium	**41**		0.56	0.10	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Beryllium	**0.23**		0.22	0.049	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Boron	**7.1**		2.8	0.39	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Cadmium	**0.16**		0.11	0.033	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Calcium	**110000**		110	36	mg/Kg	☼	02/21/16 17:45	02/25/16 14:17	10
Chromium	**9.5**	**B**	0.56	0.097	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Cobalt	**4.8**		0.28	0.063	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Copper	**12**		0.56	0.12	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Iron	**8500**		11	4.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Lead	**59**		0.28	0.14	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Magnesium	**56000**		5.6	2.3	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Manganese	**420**		0.56	0.11	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Nickel	**9.6**		0.56	0.15	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Potassium	**620**		28	4.6	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Selenium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Silver	<0.28		0.28	0.066	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Sodium	**1400**		56	7.4	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Vanadium	**12**		0.28	0.082	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	1
Zinc	**60**		1.1	0.36	mg/Kg	☼	02/21/16 17:45	02/24/16 21:53	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		02/22/16 09:43	02/23/16 04:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 04:13	1
Boron	**0.063**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:13	1

Client Sample ID: 3011-40-B01 (0-1)
Date Collected: 02/15/16 13:05
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-14
Matrix: Solid
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		02/22/16 09:43	02/23/16 04:13	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:13	1
Cobalt	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:13	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 04:13	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 04:13	1
Manganese	**1.2**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:13	1
Nickel	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:13	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 04:13	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:13	1
Zinc	**0.069**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 04:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.35**		0.025	0.010	mg/L		02/22/16 09:48	02/24/16 01:39	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		02/22/16 09:43	02/23/16 14:10	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 14:10	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		02/22/16 15:15	02/23/16 12:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0091	mg/Kg	☼	02/19/16 16:00	02/22/16 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.61**		0.200	0.200	SU			02/18/16 20:22	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.038		0.019	0.0037	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Benzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Bromodichloromethane	<0.0047		0.0047	0.00080	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Bromoform	<0.0047		0.0047	0.00097	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Bromomethane	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
2-Butanone (MEK)	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Carbon disulfide	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Carbon tetrachloride	<0.0047		0.0047	0.0010	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chlorobenzene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chloroethane	<0.0047		0.0047	0.0020	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chloroform	<0.0047		0.0047	0.00092	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Chloromethane	<0.0047	*	0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
cis-1,2-Dichloroethene	<0.0047		0.0047	0.00097	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
cis-1,3-Dichloropropene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Dibromochloromethane	<0.0047		0.0047	0.00054	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1-Dichloroethane	<0.0047		0.0047	0.00098	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,2-Dichloroethane	<0.0047		0.0047	0.00070	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1-Dichloroethene	<0.0047		0.0047	0.0017	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,2-Dichloropropane	<0.0047		0.0047	0.0012	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,3-Dichloropropene, Total	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Ethylbenzene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Methylene Chloride	<0.0047		0.0047	0.0036	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.00098	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Methyl tert-butyl ether	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Styrene	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1,2,2-Tetrachloroethane	<0.0047		0.0047	0.00075	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Tetrachloroethene	<0.0047		0.0047	0.00098	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Toluene	<0.0047		0.0047	0.0016	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
trans-1,2-Dichloroethene	<0.0047		0.0047	0.0012	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
trans-1,3-Dichloropropene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1,1-Trichloroethane	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
1,1,2-Trichloroethane	<0.0047		0.0047	0.00092	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Trichloroethene	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Vinyl acetate	<0.0047		0.0047	0.0013	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Vinyl chloride	<0.0047		0.0047	0.0011	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1
Xylenes, Total	<0.0095		0.0095	0.0018	mg/Kg	☼	02/16/16 08:50	02/21/16 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 122*	*02/16/16 08:50*	*02/21/16 00:24*	*1*
Dibromofluoromethane	*92*		*75 - 120*	*02/16/16 08:50*	*02/21/16 00:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 134*	*02/16/16 08:50*	*02/21/16 00:24*	*1*
Toluene-d8 (Surr)	*109*		*75 - 122*	*02/16/16 08:50*	*02/21/16 00:24*	*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	☼	02/19/16 07:12	02/26/16 18:09	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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	☼	02/19/16 07:12	02/26/16 18:09	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Naphthalene	**0.015**	**J**	0.036	0.0055	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Methylnaphthalene	**0.0074**	**J**	0.036	0.0066	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Acenaphthene	**0.015**	**J**	0.036	0.0065	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Fluorene	**0.022**	**J**	0.036	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Pentachlorophenol	<0.72		0.72	0.58	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Phenanthrene	**0.24**		0.036	0.0050	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Anthracene	**0.061**		0.036	0.0060	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Fluoranthene	**0.21**		0.036	0.0067	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Pyrene	**0.48**		0.036	0.0071	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Butyl benzyl phthalate	**0.12**	**J**	0.18	0.068	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[a]anthracene	**0.15**		0.036	0.0048	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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	☼	02/19/16 07:12	02/26/16 18:09	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[b]fluoranthene	**0.23**		0.036	0.0078	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[k]fluoranthene	**0.099**		0.036	0.011	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[a]pyrene	**0.16**		0.036	0.0070	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Indeno[1,2,3-cd]pyrene	**0.11**		0.036	0.0093	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
Benzo[g,h,i]perylene	**0.12**		0.036	0.012	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/19/16 07:12	02/26/16 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*81*		*25 - 110*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
Phenol-d5	*80*		*31 - 110*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
Nitrobenzene-d5	*70*		*25 - 115*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
2-Fluorobiphenyl	*75*		*25 - 119*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
2,4,6-Tribromophenol	*75*		*35 - 137*	*02/19/16 07:12*	*02/26/16 18:09*	*1*
Terphenyl-d14	*208*	*X*	*36 - 134*	*02/19/16 07:12*	*02/26/16 18:09*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<5.7		5.7	1.2	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Arsenic	**3.8**		2.9	1.3	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Barium	**60**		2.9	0.52	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Beryllium	**0.39**	**J**	1.1	0.25	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Boron	**8.8**		2.9	0.40	mg/Kg	☼	02/21/16 17:45	02/25/16 10:52	1
Cadmium	**0.33**	**J**	0.57	0.17	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Calcium	**130000**		57	18	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Chromium	**9.4**	**B**	2.9	0.49	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Cobalt	**4.0**		1.4	0.32	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Copper	**13**		2.9	0.62	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Iron	**8500**		57	22	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Lead	**47**		1.4	0.71	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Magnesium	**74000**		29	12	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Manganese	**540**		2.9	0.57	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Nickel	**7.8**		2.9	0.78	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Potassium	**900**		29	4.7	mg/Kg	☼	02/21/16 17:45	02/25/16 10:52	1
Selenium	<2.9		2.9	1.4	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Silver	<1.4		1.4	0.33	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5
Sodium	**1500**		57	7.6	mg/Kg	☼	02/21/16 17:45	02/25/16 10:52	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/21/16 17:45	02/25/16 14:29	1
Vanadium	**11**		0.29	0.084	mg/Kg	☼	02/21/16 17:45	02/25/16 14:29	1
Zinc	**43**		5.7	1.8	mg/Kg	☼	02/21/16 17:45	02/25/16 11:00	5

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.51**		0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/22/16 09:43	02/23/16 04:20	1
Boron	**0.067**	**J**	0.50	0.050	mg/L		02/22/16 09:43	02/23/16 04:20	1

Client Sample ID: 3011-40-B02 (0-1)
Date Collected: 02/15/16 13:15
Date Received: 02/16/16 08:00

Lab Sample ID: 500-107595-15
Matrix: Solid
Percent Solids: 86.8

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		02/22/16 09:43	02/23/16 04:20	1
Chromium	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Cobalt	**0.020**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Iron	<0.40		0.40	0.20	mg/L		02/22/16 09:43	02/23/16 04:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/22/16 09:43	02/23/16 04:20	1
Manganese	**5.1**		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Nickel	**0.015**	**J**	0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Selenium	<0.050		0.050	0.020	mg/L		02/22/16 09:43	02/23/16 04:20	1
Silver	<0.025		0.025	0.010	mg/L		02/22/16 09:43	02/23/16 04:20	1
Zinc	**0.082**	**J**	0.50	0.020	mg/L		02/22/16 09:43	02/23/16 04:20	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		02/22/16 09:48	02/24/16 01:46	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		02/22/16 09:43	02/23/16 14:14	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/22/16 09:43	02/23/16 14:14	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		02/22/16 15:15	02/23/16 12:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.016**	**J**	0.017	0.0087	mg/Kg	☼	02/19/16 16:00	02/22/16 13:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.65**		0.200	0.200	SU			02/18/16 20:28	1

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.

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: 500-107595-3

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 #: 500-107595
Chain of Custody Number:
Page ___ of ___
Temperature °C of Cooler:

Client: EE
Client Project #: 1009341.0008-01
Project Name: IL 38
Project Location/State: Kane County, IL
Lab Project #: 500118 64
Sampler: S. Cooper
Lab PM: D. Wright

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

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH/% Solids					Comments
14		Soil-40-D01 (0-1)	2-15-16	1305	2	S	X	X	X	X	X					
15		Soil-40-B02 (0-1)	2-15-16	1715	2	S	X	X	X	X	X					

2-15-16

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
[signature]	EE	2-15-16	1540	P. Neal	TA	2/15/16	1540
P. Neal	TA	2/15/16	1910	Sherri Scott	TA-CHI	2/16/16	0800

Lab Courier: [initials]
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:

TAL-4124-500 (1209)

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-107595-3

Login Number: 107595
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9,2.7,3.0,2.4,3.2
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	