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

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

2 E. Roosevelt Road (ISGS #2635-17)

City: Villa Park State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860698° (Decimal Degrees) Longitude: -87.977556° (-Decimal Degrees)

Identify how the lat/long data were determined:

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

IEPA Site Number(s), if assigned: BOL: 0430805045 BOW: _____ BOA: _____

II. Owner/Operator Information for Source Site

	Site Owner		Site Operator	
Name:	Illinois Department of Transportation		Illinois Department of Transportation	
Street Address:	201 West Center Court		201 West Center Court	
PO Box:				
City:	Schaumburg	State: IL	Schaumburg	State: IL
Zip Code:	60196-1096	Phone: 847-705-4159	60196-1096	Phone: 847-705-4159
Contact:	Sam Mead		Sam Mead	
Email, if available:	Sam.Mead@illinois.gov		Sam.Mead@illinois.gov	

Project Name: FAP 347 (Illinois Route 38)

Latitude: 41.860698° Longitude: -87.977556°

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 2635-17-B03 was sampled within the construction zone adjacent to ISGS #2635-17 (Community Bank of DuPage). Refer to PSI Report for ISGS #2635-17 (Community Bank of DuPage) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120067.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	(Community Bank of DuPage)	Comparison Criteria					
BORING	2635-17-B03	MACs			TACO		
SAMPLE	2635-17-B03 (0-2)						
MATRIX	Soil						
DEPTH (feet)	0-2	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
pH	8.1						
VOCs (None Detected)							
SVOCs (None Detected)							
Inorganics (mg/kg)							
Aluminum	**14,000**	--	--	--	--	--	--
Arsenic	**9.3**	11.3	13	--	13	61	--
Barium	**120**	1,500	--	--	5,500	14,000	--
Beryllium	**0.93**	22	--	--	160	410	--
Calcium	**100,000**	--	--	--	--	--	--
Chromium	**18**	21	--	--	230	690	--
Cobalt	**9.9**	20	--	--	4,700	12,000	--
Copper	**20**	2,900	--	--	2,900	8,200	--
Iron	**25,000** †m	15,000	15,900	--	--	--	--
Lead	**28**	107	--	--	400	700	--
Magnesium	**51,000**	325,000	--	--	--	730,000	--
Manganese	**560**	630	636	--	1,600	4,100	--
Mercury	**0.030**	0.89	--	--	10	0.1	--
Nickel	**25**	100	--	--	1,600	4,100	--
Potassium	**1,700**	--	--	--	--	--	--
Sodium	**370**	--	--	--	--	--	--
Vanadium	**27**	550	--	--	550	1,400	--
Zinc	**49**	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)							
Barium	**0.53**	--	--	--	--	--	2
Iron	**2.3**	--	--	--	--	--	5
Manganese	**0.079**	--	--	--	--	--	0.15
Selenium	ND U	--	--	--	--	--	0.05
SPLP Metals (Not Analyzed)							

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120067 Revision 0

RE: 1009341.0002.01, IL 38, DuPage County, IL

Dear Dean Tiebout:

STAT Analysis received 5 samples for the referenced project on 12/2/2015 5:55:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

STAT Analysis Corporation

Date: December 15, 2015

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120067 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120067-005A	2635-17-B03 (0-2)		12/2/2015 2:15:00 PM	12/2/2015
15120067-005B	2635-17-B03 (0-2)		12/2/2015 2:15:00 PM	12/2/2015

STAT Analysis Corporation

Date: *December 15, 2015*

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120067 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120067 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120067-005

Client Sample ID: 2635-17-B03 (0-2)
Collection Date: 12/2/2015 2:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/3/2015**		Analyst: **PS**
Acetone	ND	0.082		mg/Kg-dry	1	12/7/2015
Benzene	ND	0.0055		mg/Kg-dry	1	12/7/2015
Bromodichloromethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
Bromoform	ND	0.0055		mg/Kg-dry	1	12/7/2015
Bromomethane	ND	0.011		mg/Kg-dry	1	12/7/2015
2-Butanone	ND	0.082		mg/Kg-dry	1	12/7/2015
Carbon disulfide	ND	0.055		mg/Kg-dry	1	12/7/2015
Carbon tetrachloride	ND	0.0055		mg/Kg-dry	1	12/7/2015
Chlorobenzene	ND	0.0055		mg/Kg-dry	1	12/7/2015
Chloroethane	ND	0.011		mg/Kg-dry	1	12/7/2015
Chloroform	ND	0.0055		mg/Kg-dry	1	12/7/2015
Chloromethane	ND	0.011		mg/Kg-dry	1	12/7/2015
Dibromochloromethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,1-Dichloroethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,2-Dichloroethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,1-Dichloroethene	ND	0.0055		mg/Kg-dry	1	12/7/2015
cis-1,2-Dichloroethene	ND	0.0055		mg/Kg-dry	1	12/7/2015
trans-1,2-Dichloroethene	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,2-Dichloropropane	ND	0.0055		mg/Kg-dry	1	12/7/2015
cis-1,3-Dichloropropene	ND	0.0022		mg/Kg-dry	1	12/7/2015
trans-1,3-Dichloropropene	ND	0.0022		mg/Kg-dry	1	12/7/2015
Ethylbenzene	ND	0.0055		mg/Kg-dry	1	12/7/2015
2-Hexanone	ND	0.022		mg/Kg-dry	1	12/7/2015
4-Methyl-2-pentanone	ND	0.022		mg/Kg-dry	1	12/7/2015
Methylene chloride	ND	0.011		mg/Kg-dry	1	12/7/2015
Methyl tert-butyl ether	ND	0.0055		mg/Kg-dry	1	12/7/2015
Styrene	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,1,2,2-Tetrachloroethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
Tetrachloroethene	ND	0.0055		mg/Kg-dry	1	12/7/2015
Toluene	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,1,1-Trichloroethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
1,1,2-Trichloroethane	ND	0.0055		mg/Kg-dry	1	12/7/2015
Trichloroethene	ND	0.0055		mg/Kg-dry	1	12/7/2015
Vinyl chloride	ND	0.0055		mg/Kg-dry	1	12/7/2015
Xylenes, Total	ND	0.016		mg/Kg-dry	1	12/7/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Acenaphthene	ND	0.042		mg/Kg-dry	1	12/4/2015
Acenaphthylene	ND	0.042		mg/Kg-dry	1	12/4/2015

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120067 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120067-005

Client Sample ID: 2635-17-B03 (0-2)
Collection Date: 12/2/2015 2:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Aniline	ND	0.42		mg/Kg-dry	1	12/4/2015
Anthracene	ND	0.042		mg/Kg-dry	1	12/4/2015
Benz(a)anthracene	ND	0.042		mg/Kg-dry	1	12/4/2015
Benzidine	ND	0.42		mg/Kg-dry	1	12/4/2015
Benzo(a)pyrene	ND	0.042		mg/Kg-dry	1	12/4/2015
Benzo(b)fluoranthene	ND	0.042		mg/Kg-dry	1	12/4/2015
Benzo(g,h,i)perylene	ND	0.042		mg/Kg-dry	1	12/4/2015
Benzo(k)fluoranthene	ND	0.042		mg/Kg-dry	1	12/4/2015
Benzoic acid	ND	1.1		mg/Kg-dry	1	12/4/2015
Benzyl alcohol	ND	0.22		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethoxy)methane	ND	0.22		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethyl)ether	ND	0.22		mg/Kg-dry	1	12/4/2015
Bis(2-ethylhexyl)phthalate	ND	1.1		mg/Kg-dry	1	12/4/2015
4-Bromophenyl phenyl ether	ND	0.22		mg/Kg-dry	1	12/4/2015
Butyl benzyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
Carbazole	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Chloroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Chloro-3-methylphenol	ND	0.42		mg/Kg-dry	1	12/4/2015
2-Chloronaphthalene	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Chlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Chlorophenyl phenyl ether	ND	0.22		mg/Kg-dry	1	12/4/2015
Chrysene	ND	0.042		mg/Kg-dry	1	12/4/2015
Dibenz(a,h)anthracene	ND	0.042		mg/Kg-dry	1	12/4/2015
Dibenzofuran	ND	0.22		mg/Kg-dry	1	12/4/2015
1,2-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
1,3-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
1,4-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
3,3´-Dichlorobenzidine	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4-Dichlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Diethyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4-Dimethylphenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Dimethyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
4,6-Dinitro-2-methylphenol	ND	0.42		mg/Kg-dry	1	12/4/2015
2,4-Dinitrophenol	ND	1.1		mg/Kg-dry	1	12/4/2015
2,4-Dinitrotoluene	ND	0.042		mg/Kg-dry	1	12/4/2015
2,6-Dinitrotoluene	ND	0.042		mg/Kg-dry	1	12/4/2015
Di-n-butyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
Di-n-octyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120067 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120067-005

Client Sample ID: 2635-17-B03 (0-2)
Collection Date: 12/2/2015 2:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Fluoranthene	ND	0.042		mg/Kg-dry	1	12/4/2015
Fluorene	ND	0.042		mg/Kg-dry	1	12/4/2015
Hexachlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
Hexachlorobutadiene	ND	0.22		mg/Kg-dry	1	12/4/2015
Hexachlorocyclopentadiene	ND	0.22		mg/Kg-dry	1	12/4/2015
Hexachloroethane	ND	0.22		mg/Kg-dry	1	12/4/2015
Indeno(1,2,3-cd)pyrene	ND	0.042		mg/Kg-dry	1	12/4/2015
Isophorone	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Methylnaphthalene	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Methylphenol	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Methylphenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Naphthalene	ND	0.042		mg/Kg-dry	1	12/4/2015
2-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
3-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Nitrophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Nitrophenol	ND	0.42		mg/Kg-dry	1	12/4/2015
Nitrobenzene	ND	0.042		mg/Kg-dry	1	12/4/2015
N-Nitrosodi-n-propylamine	ND	0.042		mg/Kg-dry	1	12/4/2015
N-Nitrosodimethylamine	ND	0.22		mg/Kg-dry	1	12/4/2015
N-Nitrosodiphenylamine	ND	0.22		mg/Kg-dry	1	12/4/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.22		mg/Kg-dry	1	12/4/2015
Pentachlorophenol	ND	0.085		mg/Kg-dry	1	12/4/2015
Phenanthrene	ND	0.042		mg/Kg-dry	1	12/4/2015
Phenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Pyrene	ND	0.042		mg/Kg-dry	1	12/4/2015
Pyridine	ND	0.85		mg/Kg-dry	1	12/4/2015
1,2,4-Trichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4,5-Trichlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4,6-Trichlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Aluminum	14000	250		mg/Kg-dry	100	12/4/2015
Antimony	ND	2.5		mg/Kg-dry	10	12/4/2015
Arsenic	9.3	1.3		mg/Kg-dry	10	12/4/2015
Barium	120	1.3		mg/Kg-dry	10	12/4/2015
Beryllium	0.93	0.63		mg/Kg-dry	10	12/4/2015
Cadmium	ND	0.63		mg/Kg-dry	10	12/4/2015
Calcium	100000	760		mg/Kg-dry	100	12/4/2015

Qualifiers:
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120067 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120067-005

Client Sample ID: 2635-17-B03 (0-2)
Collection Date: 12/2/2015 2:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Chromium	18	1.3		mg/Kg-dry	10	12/4/2015
Cobalt	9.9	1.3		mg/Kg-dry	10	12/4/2015
Copper	20	3.2		mg/Kg-dry	10	12/4/2015
Iron	25000	380		mg/Kg-dry	100	12/4/2015
Lead	28	0.63		mg/Kg-dry	10	12/4/2015
Magnesium	51000	38		mg/Kg-dry	10	12/4/2015
Manganese	560	1.3		mg/Kg-dry	10	12/4/2015
Nickel	25	1.3		mg/Kg-dry	10	12/4/2015
Potassium	1700	38		mg/Kg-dry	10	12/4/2015
Selenium	ND	1.3		mg/Kg-dry	10	12/4/2015
Silver	ND	1.3		mg/Kg-dry	10	12/4/2015
Sodium	370	76		mg/Kg-dry	10	12/4/2015
Thallium	ND	1.3		mg/Kg-dry	10	12/4/2015
Vanadium	27	1.3		mg/Kg-dry	10	12/4/2015
Zinc	49	6.3		mg/Kg-dry	10	12/4/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.53	0.050		mg/L	5	12/5/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	ND	0.10	*	mg/L	5	12/5/2015
Cadmium	ND	0.0050		mg/L	5	12/5/2015
Chromium	ND	0.010		mg/L	5	12/5/2015
Cobalt	ND	0.010		mg/L	5	12/5/2015
Iron	2.3	0.25		mg/L	5	12/5/2015
Lead	ND	0.0050		mg/L	5	12/5/2015
Manganese	0.079	0.010		mg/L	5	12/5/2015
Nickel	ND	0.020		mg/L	5	12/5/2015
Selenium	ND	0.010		mg/L	5	12/5/2015
Silver	ND	0.010		mg/L	5	12/5/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/5/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**
Mercury	0.030	0.023		mg/Kg-dry	1	12/3/2015
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120067 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120067-005

Client Sample ID: 2635-17-B03 (0-2)
Collection Date: 12/2/2015 2:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**
Cyanide	ND	0.32		mg/Kg-dry	1	12/6/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/3/2015**		Analyst: **GH**
pH	8.1			pH Units	1	12/3/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	21.7	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	78.3	0.20	*	wt%	1	12/4/2015

Qualifiers:
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B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
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STAT Analysis Corporation
2242 W. Harrison Suite 200, Chicago, Illinois 60612 Phone: (312) 733-0551 Fax: (312) 733-2386
e-mail address:** STATinfo@STATAnalysis.com* ***AIHA, NVLAP and NELAP accredited

CHAIN OF CUSTODY RECORD

Nº: 866203 **Page :** ____ **of** ____

Company: Ecology Environment
Project Number: 1009341.0002 01 Client Tracking No.:
Project Name: IL 38
Project Location: DuPage County, IL
Sampler(s): S. Cooper
Report To: Dawn Tickner Phone: 312 578 9243
Scott Cooper Fax: 312 578 9345
QC Level: 1 ___ 2 ___ 3 ___ 4 ___ e-mail:

P.O. No.:
Quote No.:

Turn Around: 10 days
Results Needed: ___/___/___ am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH	Cyanide	Remarks	Lab No.:
2635-17-B01 (0-7)	12-2-15	1330	S		X	AF	2	X	X	X	X	X	X		001
2635-17-B01 (0-7) D	12-2-15	1330	S		X	AF	2	X	X	X	X	X	X		002
2635-17-B01 (7-14)	12-2-15	1345	S		X	AF	2	X	X	X	X	X	X		003
2635-17-B02 (0-2)	12-2-15	1400	S		X	AF	2	X	X	X	X	X	X		004
2635-17-B03 (0-2)	12-2-15	1415	S		X	AF	2	X	X	X	X	X	X		005

Relinquished by: (Signature) Date/Time: 12-2-15/1525
Received by: (Signature) Date/Time: 12/2/15 15:25
Relinquished by: (Signature) Date/Time: 12/2/15 17:55
Received by: (Signature) Date/Time: 12/2/15 1755
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments:

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120067

Received on Ice: Yes [X] No [ ]

Temperature: 36 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E

Date and Time Received: 12/2/2015 5:55:00 PM

Work Order Number 15120067

Received by: DO

Checklist completed by: Signature 12/2/15 Date

Reviewed by: Initials 12/3/15 Date

Matrix: Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 3.6 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120615-3	97.4	97.5	124	114				
VLCS120615-3	100	106	122	114				
VLCSD120615-3	102	105	119	112				
15120067-001A	86.7	109	130	111				
15120067-002A	90.0	103	125	118				
15120067-003A	84.7	108	127	115				
15120067-004A	82.8	96.0	114	117				
15120067-005A	99.8	99.7	115	122				
VBLK120715A-3	106	99.7	114	103				
VLCS120715A-3	104	101	112	105				
VLCSD120715A-3	105	103	110	106				
15120067-001A:50	104	103	108	109				
15120067-002A:50	98.7	105	105	105				
15120067-003A:50	102	100	104	110				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3153867	BFB120615-3	TUNE	BFB	R116698	1	12/06/2015 15:38
3153868	VSTD100	CCV	VOC_ENCORE+	R116698	1	12/06/2015 16:41
3153869	VBLK120615-3	MBLK	VOC_ENCORE+	R116698	1	12/06/2015 17:23
3153870	VLCS120615-3	LCS	VOC_ENCORE+	R116698	1	12/06/2015 17:59
3153871	VLCSD120615-3	LCSD	VOC_ENCORE+	R116698	1	12/06/2015 18:35
3153872	15120051-015A	RA	VOC_5035	88776	1	12/06/2015 19:41
3153873	15120051-016A	SAMP	VOC_5035	88776	1	12/06/2015 20:16
3153874	15120051-017A	SAMP	VOC_5035	88776	1	12/06/2015 20:52
3153875	15120079-011A	SAMP	VOC_ENCORE	88844	50000	12/06/2015 21:39
3153876	15120065-001A	SAMP	VOC_5035	88773	1	12/06/2015 22:14
3153877	15120065-002A	SAMP	VOC_5035	88773	1	12/06/2015 22:50
3153878	15120067-001A	SAMP	VOC_5035	88818	1	12/06/2015 23:26
3153880	15120067-002A	SAMP	VOC_5035	88818	1	12/07/2015 00:02
3153881	15120067-003A	SAMP	VOC_5035	88818	1	12/07/2015 00:37
3153883	15120067-004A	SAMP	VOC_5035	88818	1	12/07/2015 01:13
3153885	15120067-005A	SAMP	VOC_5035	88818	1	12/07/2015 01:48
3153887	15120079-011A	SAMP	VOC_ENCORE	88844	100	12/07/2015 02:24
3153892	15120079-016A	SAMP	VOC_ENCORE	88844	100	12/07/2015 02:59

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120615-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116698

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120615-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120615-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153870**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04838	0.0050	0.05	0	96.8	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04626	0.0050	0.05	0	92.5	70	130	0	0		
1,1,2-Trichloroethane	0.04619	0.0050	0.05	0	92.4	70	130	0	0		
1,1-Dichloroethane	0.04921	0.0050	0.05	0	98.4	70	130	0	0		
1,1-Dichloroethene	0.05061	0.0050	0.05	0	101	70	130	0	0		
1,2-Dichloroethane	0.04899	0.0050	0.05	0	98	70	130	0	0		
1,2-Dichloropropane	0.04644	0.0050	0.05	0	92.9	70	130	0	0		
2-Butanone	0.1111	0.075	0.1	0	111	70	130	0	0		
2-Hexanone	0.09931	0.020	0.1	0	99.3	70	130	0	0		
4-Methyl-2-pentanone	0.1087	0.020	0.1	0	109	70	130	0	0		
Acetone	0.1091	0.075	0.1	0	109	50	150	0	0		
Benzene	0.04578	0.0050	0.05	0	91.6	70	130	0	0		
Bromodichloromethane	0.04791	0.0050	0.05	0	95.8	70	130	0	0		
Bromoform	0.04802	0.0050	0.05	0	96	70	130	0	0		
Bromomethane	0.04712	0.010	0.05	0	94.2	70	130	0	0		
Carbon disulfide	0.1128	0.050	0.1	0	113	70	130	0	0		
Carbon tetrachloride	0.048	0.0050	0.05	0	96	70	130	0	0		
Chlorobenzene	0.04277	0.0050	0.05	0	85.5	70	130	0	0		
Chloroethane	0.05199	0.010	0.05	0	104	70	130	0	0		
Chloroform	0.0522	0.0050	0.05	0	104	70	130	0	0		
Chloromethane	0.04755	0.010	0.05	0	95.1	70	130	0	0		
cis-1,2-Dichloroethene	0.04793	0.0050	0.05	0	95.9	70	130	0	0		
cis-1,3-Dichloropropene	0.0458	0.0020	0.05	0	91.6	70	130	0	0		
Dibromochloromethane	0.04772	0.0050	0.05	0	95.4	70	130	0	0		
Ethylbenzene	0.04395	0.0050	0.05	0	87.9	70	130	0	0		
Methyl tert-butyl ether	0.05637	0.0050	0.05	0	113	70	130	0	0		
Methylene chloride	0.0492	0.010	0.05	0	98.4	70	130	0	0		
Styrene	0.04547	0.0050	0.05	0	90.9	70	130	0	0		
Tetrachloroethene	0.04344	0.0050	0.05	0	86.9	70	130	0	0		
Toluene	0.04642	0.0050	0.05	0	92.8	70	130	0	0		
trans-1,2-Dichloroethene	0.0548	0.0050	0.05	0	110	70	130	0	0		
trans-1,3-Dichloropropene	0.04582	0.0020	0.05	0	91.6	70	130	0	0		
Trichloroethene	0.04762	0.0050	0.05	0	95.2	70	130	0	0		
Vinyl chloride	0.04997	0.0050	0.05	0	99.9	70	130	0	0		
Xylenes, Total	0.1328	0.015	0.15	0	88.5	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116698

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120615-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153871**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04673	0.0050	0.05	0	93.5	70	130	0.04838	3.47	20	
1,1,2,2-Tetrachloroethane	0.04585	0.0050	0.05	0	91.7	70	130	0.04626	0.890	20	
1,1,2-Trichloroethane	0.04584	0.0050	0.05	0	91.7	70	130	0.04619	0.761	20	
1,1-Dichloroethane	0.04705	0.0050	0.05	0	94.1	70	130	0.04921	4.49	20	
1,1-Dichloroethene	0.04726	0.0050	0.05	0	94.5	70	130	0.05061	6.85	20	
1,2-Dichloroethane	0.04719	0.0050	0.05	0	94.4	70	130	0.04899	3.74	20	
1,2-Dichloropropane	0.04567	0.0050	0.05	0	91.3	70	130	0.04644	1.67	20	
2-Butanone	0.1036	0.075	0.1	0	104	70	130	0.1111	6.99	20	
2-Hexanone	0.09948	0.020	0.1	0	99.5	70	130	0.09931	0.171	20	
4-Methyl-2-pentanone	0.1062	0.020	0.1	0	106	70	130	0.1087	2.31	20	
Acetone	0.1043	0.075	0.1	0	104	50	150	0.1091	4.46	20	
Benzene	0.04447	0.0050	0.05	0	88.9	70	130	0.04578	2.90	20	
Bromodichloromethane	0.04722	0.0050	0.05	0	94.4	70	130	0.04791	1.45	20	
Bromoform	0.04787	0.0050	0.05	0	95.7	70	130	0.04802	0.313	20	
Bromomethane	0.04342	0.010	0.05	0	86.8	70	130	0.04712	8.17	20	
Carbon disulfide	0.1048	0.050	0.1	0	105	70	130	0.1128	7.35	20	
Carbon tetrachloride	0.04731	0.0050	0.05	0	94.6	70	130	0.048	1.45	20	
Chlorobenzene	0.04221	0.0050	0.05	0	84.4	70	130	0.04277	1.32	20	
Chloroethane	0.0489	0.010	0.05	0	97.8	70	130	0.05199	6.13	20	
Chloroform	0.04858	0.0050	0.05	0	97.2	70	130	0.0522	7.18	20	
Chloromethane	0.04764	0.010	0.05	0	95.3	70	130	0.04755	0.189	20	
cis-1,2-Dichloroethene	0.0466	0.0050	0.05	0	93.2	70	130	0.04793	2.81	20	
cis-1,3-Dichloropropene	0.04479	0.0020	0.05	0	89.6	70	130	0.0458	2.23	20	
Dibromochloromethane	0.04666	0.0050	0.05	0	93.3	70	130	0.04772	2.25	20	
Ethylbenzene	0.04266	0.0050	0.05	0	85.3	70	130	0.04395	2.98	20	
Methyl tert-butyl ether	0.0544	0.0050	0.05	0	109	70	130	0.05637	3.56	20	
Methylene chloride	0.04591	0.010	0.05	0	91.8	70	130	0.0492	6.92	20	
Styrene	0.04501	0.0050	0.05	0	90	70	130	0.04547	1.02	20	
Tetrachloroethene	0.04225	0.0050	0.05	0	84.5	70	130	0.04344	2.78	20	
Toluene	0.04499	0.0050	0.05	0	90	70	130	0.04642	3.13	20	
trans-1,2-Dichloroethene	0.05261	0.0050	0.05	0	105	70	130	0.0548	4.08	20	
trans-1,3-Dichloropropene	0.04551	0.0020	0.05	0	91	70	130	0.04582	0.679	20	
Trichloroethene	0.0454	0.0050	0.05	0	90.8	70	130	0.04762	4.77	20	
Vinyl chloride	0.04856	0.0050	0.05	0	97.1	70	130	0.04997	2.86	20	
Xylenes, Total	0.132	0.015	0.15	0	88	70	130	0.1328	0.559	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3154312	BFB120715A-3	TUNE	BFB	R116727	1	12/07/2015 12:30
3154314	VSTD100R	CCV	VOC_ENCORE+	R116727	1	12/07/2015 13:38
3154349	VBLK120715A-3	MBLK	VOC_ENCORE+	R116727	1	12/07/2015 14:14
3154316	VLCS120715A-3	LCS	VOC_ENCORE+	R116727	1	12/07/2015 14:50
3154317	VLCSD120715A-3	LCSD	VOC_ENCORE+	R116727	1	12/07/2015 15:25
3154341	15120067-001A	SAMP	VOC_5035	88843	50	12/07/2015 16:11
3154319	15120067-002A	SAMP	VOC_5035	88843	50	12/07/2015 16:47
3154342	15120067-003A	SAMP	VOC_5035	88842	50	12/07/2015 17:22
3154343	15120079-017A	SAMP	VOC_ENCORE	88873	50	12/07/2015 17:58
3154344	15120079-022A	SAMP	VOC_ENCORE	88873	50	12/07/2015 18:34
3154345	15120079-018A	SAMP	VOC_ENCORE	88873	1000	12/07/2015 19:09
3154347	15120079-018A	SAMP	VOC_ENCORE	88873	50	12/07/2015 19:45
3154376	15120152-001A	SAMP	VOC_5035	88843	1	12/07/2015 20:20
3154377	15120152-002A	SAMP	VOC_5035	88843	1	12/07/2015 20:56
3154378	15120194-001A	SAMP	VOC_5035	88874	1	12/07/2015 21:31
3154379	15120194-002A	SAMP	VOC_5035	88874	1	12/07/2015 22:07

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120715A-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-3_151207A**	**3154349**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	ND	0.0050									
Ethylbenzene	ND	0.0050									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120715A-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-3_151207A**	**3154316**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	0.05169	0.0050	0.05	0	103	70	130	0	0		
Ethylbenzene	0.05163	0.0050	0.05	0	103	70	130	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120715A-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-3_151207A**	**3154317**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	0.05132	0.0050	0.05	0	103	70	130	0.0517	0.718	20	
Ethylbenzene	0.05279	0.0050	0.05	0	106	70	130	0.0516	2.22	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
15110611-002BMS	44.7	48.0	44.4	71.6	40.3	43.2	58.0	63.9
15110611-002BMSD	42.8	46.6	41.6	80.7	40.0	41.4	57.3	77.0
15120067-001B	56.2	60.9	51.7	89.9	50.9	52.9	72.7	82.8
15120067-002B	51.5	54.8	48.6	87.7	45.6	48.8	69.9	81.2
15120067-003B	49.8	53.7	45.9	83.7	45.5	46.9	64.4	81.3
15120067-004B	48.0	51.2	44.6	84.7	42.4	46.3	65.5	75.1
15120067-005B	49.1	53.6	44.9	83.5	44.0	45.4	63.5	76.6
MB-88783-SVOC	67.8	71.0	65.9	107	65.8	67.3	82.3	83.3
LCS-88783-SVOC	68.2	72.3	71.3	124 *	62.8	68.2	89.5	85.7

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88783-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
LCS-88783-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-002B	Soil		0.03024	0	0	1	33.069	12/3/2015	12/3/2015
15110611-010B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-012B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-020B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120064-001B	Soil		0.03019	0	0	1	33.124	12/3/2015	12/3/2015
15120064-002B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120064-003B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120064-004B	Soil		0.03005	0	0	1	33.278	12/3/2015	12/3/2015
15120064-005B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120064-006B	Soil		0.03003	0	0	1	33.300	12/3/2015	12/3/2015
15120065-001B	Soil		0.03018	0	0	1	33.135	12/3/2015	12/3/2015
15120065-002B	Soil		0.03003	0	0	1	33.300	12/3/2015	12/3/2015
15120067-001B	Soil		0.03007	0	0	1	33.256	12/3/2015	12/3/2015
15120067-002B	Soil		0.03035	0	0	1	32.949	12/3/2015	12/3/2015
15120067-003B	Soil		0.03022	0	0	1	33.091	12/3/2015	12/3/2015
15120067-004B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120067-005B	Soil		0.03026	0	0	1	33.047	12/3/2015	12/3/2015
15110611-002BMS	Soil		0.03023	0	0	1	33.080	12/3/2015	12/3/2015
15110611-002BMSD	Soil		0.03023	0	0	1	33.080	12/3/2015	12/3/2015
15120069-001B	Soil		0.03042	0	0	1	32.873	12/3/2015	12/3/2015
15120069-002B	Soil		0.03039	0	0	1	32.906	12/3/2015	12/3/2015
15120069-003B	Soil		0.03013	0	0	1	33.190	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88783

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88783-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152367**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.404	0.033	1.667	0	84.2	37	134	0	0		
4-Chloro-3-methylphenol	2.853	0.33	3.333	0	85.6	29	134	0	0		
2-Chlorophenol	2.346	0.17	3.333	0	70.4	29	105	0	0		
1,4-Dichlorobenzene	1.204	0.17	1.667	0	72.2	26	111	0	0		
2,4-Dinitrotoluene	1.584	0.033	1.667	0	95	46	125	0	0		
4-Nitrophenol	3.012	0.33	3.333	0	90.4	12	146	0	0		
N-Nitrosodi-n-propylamine	1.135	0.033	1.667	0	68.1	29	109	0	0		
Pentachlorophenol	3.613	0.067	3.333	0	108	10	192	0	0		
Phenol	2.224	0.17	3.333	0	66.7	27	104	0	0		
Pyrene	1.399	0.033	1.667	0	83.9	42	148	0	0		
1,2,4-Trichlorobenzene	1.366	0.17	1.667	0	81.9	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-002BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-5_151204A**	**3152572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.161	0.040	2.003	0	58	24	139	0	0		
4-Chloro-3-methylphenol	2.239	0.40	4.004	0	55.9	28	121	0	0		
2-Chlorophenol	1.855	0.20	4.004	0	46.3	21	102	0	0		
1,4-Dichlorobenzene	0.9567	0.20	2.003	0	47.8	27	95	0	0		
2,4-Dinitrotoluene	1.244	0.040	2.003	0	62.1	32	127	0	0		
4-Nitrophenol	2.439	0.40	4.004	0	60.9	10	156	0	0		
N-Nitrosodi-n-propylamine	0.8154	0.040	2.003	0	40.7	16	122	0	0		
Pentachlorophenol	2.706	0.080	4.004	0	67.6	10	204	0	0		
Phenol	1.728	0.20	4.004	0	43.2	20	103	0	0		
Pyrene	1.299	0.040	2.003	0	64.8	10	184	0	0		
1,2,4-Trichlorobenzene	1.064	0.20	2.003	0	53.1	55	106	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-002BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-5_151204A**	**3152593**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.215	0.040	2.003	0	60.7	24	139	1.161	4.52	57	
4-Chloro-3-methylphenol	2.294	0.40	4.004	0	57.3	28	121	2.239	2.44	88	
2-Chlorophenol	1.759	0.20	4.004	0	43.9	21	102	1.855	5.30	49	
1,4-Dichlorobenzene	0.9672	0.20	2.003	0	48.3	27	95	0.9567	1.08	43	
2,4-Dinitrotoluene	1.433	0.040	2.003	0	71.5	32	127	1.244	14.1	37	
4-Nitrophenol	2.852	0.40	4.004	0	71.2	10	156	2.439	15.6	56	
N-Nitrosodi-n-propylamine	0.7849	0.040	2.003	0	39.2	16	122	0.8154	3.80	47	
Pentachlorophenol	3.237	0.080	4.004	0	80.8	10	204	2.706	17.9	47	
Phenol	1.62	0.20	4.004	0	40.5	20	103	1.728	6.48	66	
Pyrene	1.533	0.040	2.003	0	76.5	10	184	1.299	16.5	51	
1,2,4-Trichlorobenzene	1.009	0.20	2.003	0	50.4	55	106	1.064	5.37	23	S

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88809

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
ILCSS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
15110611-006B	Soil		1.049	0	0	50	47.664	12/4/2015	12/4/2015
15110611-006BMS	Soil		1.043	0	0	50	47.939	12/4/2015	12/4/2015
15110611-006BMSD	Soil		1.047	0	0	50	47.755	12/4/2015	12/4/2015
15110611-010B	Soil		1.035	0	0	50	48.309	12/4/2015	12/4/2015
15120068-001B	Soil		1.08	0	0	50	46.296	12/4/2015	12/4/2015
15120068-002B	Soil		1.089	0	0	50	45.914	12/4/2015	12/4/2015
15120068-003B	Soil		1.051	0	0	50	47.574	12/4/2015	12/4/2015
15120068-004B	Soil		1.052	0	0	50	47.529	12/4/2015	12/4/2015
15120069-001B	Soil		1.05	0	0	50	47.619	12/4/2015	12/4/2015
15120069-002B	Soil		1.055	0	0	50	47.393	12/4/2015	12/4/2015
15120069-003B	Soil		1.075	0	0	50	46.512	12/4/2015	12/4/2015
15120065-001B	Soil		1.063	0	0	50	47.037	12/4/2015	12/4/2015
15120065-002B	Soil		1.012	0	0	50	49.407	12/4/2015	12/4/2015
15120067-001B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120067-002B	Soil		1.013	0	0	50	49.358	12/4/2015	12/4/2015
15120067-003B	Soil		1.072	0	0	50	46.642	12/4/2015	12/4/2015
15120067-004B	Soil		1.065	0	0	50	46.948	12/4/2015	12/4/2015
15120067-005B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120144-001B	Soil		1.082	0	0	50	46.211	12/4/2015	12/4/2015
15120144-002B	Soil		1.069	0	0	50	46.773	12/4/2015	12/4/2015
15120144-003B	Soil		1.01	0	0	50	49.505	12/4/2015	12/4/2015
15120145-001B	Soil		1.092	0	0	50	45.788	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	1.498	1.0									
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.0515	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	0.0215	0.25									J
Sodium	ND	30									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88809

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.032	0.50									J
Vanadium	ND	0.50									
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152979**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	23.34	10	25	0	93.4	80	120	0	0		
Arsenic	24.22	0.50	25	0	96.9	80	120	0	0		
Beryllium	24.28	0.25	25	0	97.1	80	120	0	0		
Cadmium	25.26	0.25	25	0	101	80	120	0	0		
Chromium	24.26	0.50	25	0	97.1	80	120	0	0		
Cobalt	24.18	0.50	25	0	96.7	80	120	0	0		
Iron	97.7	15	100	0	97.7	80	120	0	0		
Lead	25.04	0.25	25	0.0515	99.9	80	120	0	0		
Magnesium	92	15	100	0	92	80	120	0	0		
Manganese	24.37	0.50	25	0	97.5	80	120	0	0		
Nickel	23.45	0.50	25	0	93.8	80	120	0	0		
Potassium	95.5	15	100	0	95.5	80	120	0	0		
Selenium	22.84	0.25	25	0	91.3	80	120	0	0		
Silver	10.57	0.25	10	0.0215	105	80	120	0	0		
Vanadium	23.9	0.50	25	0	95.6	80	120	0	0		
Zinc	20.64	2.5	25	0	82.6	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154062**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	19.57	1.0	12.5	1.498	145	80	120	0	0		BS
Barium	27.12	0.50	25	0	108	80	120	0	0		
Calcium	97.1	30	100	0	97.1	80	120	0	0		
Copper	24.55	1.2	25	0	98.2	80	120	0	0		
Sodium	94.4	30	100	0	94.4	80	120	0	0		
Thallium	24.84	0.50	25	0.032	99.2	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	799.6	23	28.84	716.4	288	75	125	0	0		S
Arsenic	31.15	1.2	28.84	0.6849	106	75	125	0	0		
Beryllium	29.58	0.58	28.84	0.08776	102	75	125	0	0		
Cadmium	30.38	0.58	28.84	0	105	75	125	0	0		
Chromium	31.49	1.2	28.84	1.393	104	75	125	0	0		
Cobalt	31.21	1.2	28.84	1.387	103	75	125	0	0		
Iron	2021	35	115.4	1834	163	75	125	0	0		S
Lead	33.34	0.58	28.84	1.892	109	75	125	0	0		
Magnesium	3462	35	115.4	3189	237	75	125	0	0		S
Manganese	54.9	1.2	28.84	23.45	109	75	125	0	0		
Nickel	31.18	1.2	28.84	2.191	101	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Potassium	262.5	35	115.4	134	111	75	125	0	0		
Selenium	29.78	0.58	28.84	0	103	75	125	0	0		
Silver	12.58	0.58	11.54	0.05392	109	75	125	0	0		
Vanadium	32.45	1.2	28.84	2.302	105	75	125	0	0		
Zinc	32.12	5.8	28.84	4.955	94.2	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153571**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	33.19	1.2	28.84	2.77	105	75	125	0	0		
Calcium	6080	69	115.4	5799	244	75	125	0	0		S
Copper	28.86	2.9	28.84	0	100	75	125	0	0		
Iron	1924	35	115.4	1870	46.3	75	125	0	0		S
Sodium	135	69	115.4	0	117	75	125	0	0		
Thallium	27.61	1.2	28.84	0	95.7	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152983**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	769.5	23	28.73	716.4	185	75	125	799.6	3.83	20	S
Arsenic	29.82	1.1	28.73	0.6849	101	75	125	31.15	4.37	20	
Beryllium	28.49	0.57	28.73	0.08776	98.8	75	125	29.58	3.77	20	
Cadmium	29.43	0.57	28.73	0	102	75	125	30.38	3.16	20	
Chromium	29.88	1.1	28.73	1.393	99.2	75	125	31.49	5.24	20	
Cobalt	29	1.1	28.73	1.387	96.1	75	125	31.21	7.33	20	
Iron	1887	34	114.9	1834	46.5	75	125	2021	6.86	20	S
Lead	30.96	0.57	28.73	1.892	101	75	125	33.34	7.40	20	
Magnesium	3212	34	114.9	3189	19.8	75	125	3462	7.51	20	S
Manganese	52.05	1.1	28.73	23.45	99.5	75	125	54.9	5.33	20	
Nickel	29.6	1.1	28.73	2.191	95.4	75	125	31.18	5.19	20	
Potassium	251.7	34	114.9	134	102	75	125	262.5	4.19	20	
Selenium	27.83	0.57	28.73	0	96.8	75	125	29.78	6.78	20	
Silver	11.92	0.57	11.49	0.05392	103	75	125	12.58	5.32	20	
Vanadium	30.31	1.1	28.73	2.302	97.5	75	125	32.45	6.82	20	
Zinc	30.28	5.7	28.73	4.955	88.1	75	125	32.12	5.90	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	31.52	1.1	28.73	2.77	100	75	125	35.44	11.7	20	
Calcium	5804	69	114.9	5799	4.64	75	125	6253	7.45	20	S
Copper	27.72	2.9	28.73	0	96.5	75	125	30.06	8.08	20	
Iron	1869	34	114.9	1870	-1.39	75	125	2021	7.84	20	S
Sodium	128.3	69	114.9	0	112	75	125	150.2	15.7	20	
Thallium	26.77	1.1	28.73	0	93.2	75	125	29.96	11.3	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTA1 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTB 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153663**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00252	0.015									J
Barium	0.00723	0.050									J
Beryllium	0.00133	0.0050									J
Boron	ND	0.20									*
Cadmium	ND	0.0050									
Chromium	0.00263	0.010									J
Cobalt	ND	0.010									
Iron	ND	0.25									
Lead	0.00622	0.0050									
Manganese	ND	0.010									
Nickel	0.00163	0.020									J
Selenium	0.02254	0.010									
Silver	0.00136	0.010									J
Thallium	0.00532	0.0050									
Zinc	ND	0.050									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
iMBTB 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153685**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00547	0.015									J
Barium	0.0283	0.050									J

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
iMBTB 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153685**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Beryllium	0.00122	0.0050									J
Boron	ND	0.20									*
Cadmium	ND	0.0050									
Chromium	0.00222	0.010									J
Cobalt	ND	0.010									
Iron	0.04498	0.25									J
Lead	0.00398	0.0050									J
Manganese	ND	0.010									
Nickel	ND	0.020									
Selenium	0.0136	0.010									
Silver	0.00056	0.010									J
Thallium	0.00255	0.0050									J
Zinc	0.01228	0.050									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3818	0.015	0.25	0	153	75	125	0	0		S
Barium	0.7309	0.050	0.5	0.2486	96.5	75	125	0	0		
Beryllium	0.4595	0.0050	0.5	0	91.9	75	125	0	0		
Boron	0.5382	0.20	0.5	0.07279	93.1	75	125	0	0		*
Cadmium	0.4657	0.0050	0.5	0.00168	92.8	75	125	0	0		
Chromium	0.4769	0.010	0.5	0	95.4	75	125	0	0		
Iron	8.144	0.25	2	6.457	84.4	75	125	0	0		
Lead	0.5213	0.0050	0.5	0.0039	103	75	125	0	0		
Manganese	2.325	0.010	0.5	1.963	72.4	75	125	0	0		S
Nickel	0.4481	0.020	0.5	0.02373	84.9	75	125	0	0		
Selenium	0.5055	0.010	0.5	0	101	75	125	0	0		
Silver	0.1895	0.010	0.2	0	94.8	75	125	0	0		
Zinc	0.379	0.050	0.5	0	75.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-002AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153684**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3956	0.015	0.25	0	158	75	125	0	0		S
Barium	0.696	0.050	0.5	0.2229	94.6	75	125	0	0		
Beryllium	0.4479	0.0050	0.5	0.00138	89.3	75	125	0	0		
Boron	0.5084	0.20	0.5	0.07339	87	75	125	0	0		*
Cadmium	0.4504	0.0050	0.5	0	90.1	75	125	0	0		
Chromium	0.4579	0.010	0.5	0.00555	90.5	75	125	0	0		
Cobalt	0.4391	0.010	0.5	0	87.8	75	125	0	0		
Iron	3.131	0.25	2	1.601	76.5	75	125	0	0		
Lead	0.4866	0.0050	0.5	0.00443	96.4	75	125	0	0		
Manganese	0.5423	0.010	0.5	0.1063	87.2	75	125	0	0		
Nickel	0.4152	0.020	0.5	0.00456	82.1	75	125	0	0		
Selenium	0.4716	0.010	0.5	0	94.3	75	125	0	0		
Silver	0.1838	0.010	0.2	0	91.9	75	125	0	0		
Thallium	0.4604	0.0050	0.5	0	92.1	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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H/HT - Holding Time Exceeded
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E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-002AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153684**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	0.3813	0.050	0.5	0	76.3	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154070**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4886	0.010	0.5	0.01341	95	75	125	0	0		
Thallium	0.5081	0.0050	0.5	0	102	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3877	0.015	0.25	0	155	75	125	0.3818	1.53	20	S
Barium	0.7407	0.050	0.5	0.2486	98.4	75	125	0.7309	1.33	20	
Beryllium	0.458	0.0050	0.5	0	91.6	75	125	0.4595	0.327	20	
Boron	0.5514	0.20	0.5	0.07279	95.7	75	125	0.5382	2.42	20	*
Cadmium	0.4794	0.0050	0.5	0.00168	95.5	75	125	0.4657	2.90	20	
Chromium	0.49	0.010	0.5	0	98	75	125	0.4769	2.71	20	
Iron	8.216	0.25	2	6.457	88	75	125	8.144	0.880	20	
Lead	0.5285	0.0050	0.5	0.0039	105	75	125	0.5213	1.37	20	
Manganese	2.369	0.010	0.5	1.963	81.2	75	125	2.325	1.87	20	
Nickel	0.4567	0.020	0.5	0.02373	86.6	75	125	0.4481	1.90	20	
Selenium	0.5075	0.010	0.5	0	102	75	125	0.5055	0.395	20	
Silver	0.1933	0.010	0.2	0	96.7	75	125	0.1895	1.99	20	
Zinc	0.3905	0.050	0.5	0	78.1	75	125	0.379	2.99	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154071**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4877	0.010	0.5	0.01341	94.9	75	125	0.4886	0.184	20	
Thallium	0.5063	0.0050	0.5	0	101	75	125	0.5081	0.355	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153661**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00191	0.0060									J
Barium	ND	0.0040									
Beryllium	0.00045	0.0020									J
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	0.02087	0.10									J
Lead	0.00037	0.0020									J
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.00291	0.0040									J
Silver	0.00054	0.0040									J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153661**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	ND	0.0020									
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153662**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3925	0.0060	0.25	0.00191	156	80	120	0	0		S
Barium	0.4838	0.0040	0.5	0	96.8	80	120	0	0		
Beryllium	0.493	0.0020	0.5	0.00045	98.5	80	120	0	0		
Boron	0.4585	0.080	0.5	0	91.7	80	120	0	0		
Cadmium	0.5143	0.0020	0.5	0	103	80	120	0	0		
Chromium	0.4788	0.0040	0.5	0	95.8	80	120	0	0		
Cobalt	0.4756	0.0040	0.5	0	95.1	80	120	0	0		
Iron	1.939	0.10	2	0.02087	95.9	80	120	0	0		
Lead	0.5226	0.0020	0.5	0.00037	104	80	120	0	0		
Manganese	0.4849	0.0040	0.5	0	97	80	120	0	0		
Nickel	0.46	0.0040	0.5	0	92	80	120	0	0		
Selenium	0.5162	0.0040	0.5	0.00291	103	80	120	0	0		
Silver	0.213	0.0040	0.2	0.00054	106	80	120	0	0		
Zinc	0.4505	0.020	0.5	0	90.1	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/10/2015**	**ICPMS_151210B**	**3157568**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.4924	0.010	0.5	0	98.5	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88823

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW2 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW2 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBSPLP 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002BMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002BMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBSPLP 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153640**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	0.0334	0.10									J
Manganese	ND	0.0040									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153643**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	2.789	0.10	2	0.8849	95.2	75	125	0	0		
Manganese	0.5202	0.0040	0.5	0.0412	95.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153644**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	2.768	0.10	2	0.8849	94.2	75	125	2.789	0.756	20	
Manganese	0.5162	0.0040	0.5	0.0412	95	75	125	0.5202	0.772	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW2 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153638**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	0.0498	0.10									J
Manganese	ND	0.0040									

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88823

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW2 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153639**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	1.981	0.10	2	0.0498	96.6	80	120	0	0		
Manganese	0.4865	0.0040	0.5	0	97.3	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88800

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
HGLCSS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
15120065-001B	Soil		0.302	0	0	30	99.338	12/3/2015	12/3/2015
15120065-002B	Soil		0.346	0	0	30	86.705	12/3/2015	12/3/2015
15120067-001B	Soil		0.366	0	0	30	81.967	12/3/2015	12/3/2015
15120067-002B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120067-003B	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-003BMS	Soil		0.306	0	0	30	98.039	12/3/2015	12/3/2015
15120067-003BMSD	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-004B	Soil		0.358	0	0	30	83.799	12/3/2015	12/3/2015
15120067-005B	Soil		0.334	0	0	30	89.820	12/3/2015	12/3/2015
15120068-001B	Soil		0.336	0	0	30	89.286	12/3/2015	12/3/2015
15120068-002B	Soil		0.37	0	0	30	81.081	12/3/2015	12/3/2015
15120068-003B	Soil		0.307	0	0	30	97.720	12/3/2015	12/3/2015
15120068-004B	Soil		0.328	0	0	30	91.463	12/3/2015	12/3/2015
15120069-001B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120069-002B	Soil		0.32	0	0	30	93.750	12/3/2015	12/3/2015
15120069-003B	Soil		0.351	0	0	30	85.470	12/3/2015	12/3/2015
15120106-001B	Soil		0.313	0	0	30	95.847	12/4/2015	12/4/2015
15120107-001B	Soil		0.331	0	0	30	90.634	12/4/2015	12/4/2015
15120109-001B	Soil		0.33	0	0	30	90.909	12/4/2015	12/4/2015
15120109-002B	Soil		0.308	0	0	30	97.403	12/4/2015	12/4/2015
15120109-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120109-004B	Soil		0.319	0	0	30	94.044	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS1 12/3/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS1 12/3/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**2635-17-B01 (7-14)**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152172**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.3214	0.023	0.287	0.02606	103	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMSD	**2635-17-B01 (7-14)**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152173**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2946	0.022	0.2833	0.02606	94.8	75	125	0.3214	8.70	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTB 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTB 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156553**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0	0	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**2635-17-B01 (7-14**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156540**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0026	0.00020	0.0025	0	104	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156551**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0029	0.00020	0.0025	0	116	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156552**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0029	3.51	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW2 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156532**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156534**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW2 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156533**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	85	115	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88788

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
TCNLCSS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMS	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMSD	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-005B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-006B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS1 120315	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151856**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.1433	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS1 120315	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151857**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.43	0.25	10	0.1433	103	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	9.369	0.26	10.43	0.2084	87.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151860**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.26	10.43	0.2084	97.4	75	125	9.369	10.1	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS2 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
TCNLCSS2 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
15120055-001AMS	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120055-001AMSD	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120055-001A	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-005B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120093-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120093-002B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120093-003B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120106-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120107-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-002B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-003B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-004B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-005B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-006B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-007B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-008B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-009B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120110-010B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120111-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120111-012B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120111-013B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:		TestNo:	Prep Date:	Analysis Date:		Run ID:			SeqNo:
TCNMBS2 120315	**ZZZZZ**	**MBLK**	**mg/Kg**		**SW9012A**	**12/3/2015**	**12/6/2015**		**LACHAT_151206C**			**3153449**
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual	
Cyanide	ND	0.25										

Sample ID:	Customer ID:	SampType:	Units:		TestNo:	Prep Date:	Analysis Date:		Run ID:			SeqNo:
TCNLCSS2 120315	**ZZZZZ**	**LCS**	**mg/Kg**		**SW9012A**	**12/3/2015**	**12/6/2015**		**LACHAT_151206C**			**3153450**
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual	
Cyanide	10.28	0.25	10	0	103	90	110	0	0			

Sample ID:	Customer ID:	SampType:	Units:		TestNo:	Prep Date:	Analysis Date:		Run ID:			SeqNo:
15120055-001AMS	**ZZZZZ**	**MS**	**mg/Kg**		**SW9012A**	**12/3/2015**	**12/6/2015**		**LACHAT_151206C**			**3153452**
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual	
Cyanide	10.53	0.25	10	0.7961	97.3	75	125	0	0			

Sample ID:	Customer ID:	SampType:	Units:		TestNo:	Prep Date:	Analysis Date:		Run ID:			SeqNo:
15120055-001AMSD	**ZZZZZ**	**MSD**	**mg/Kg**		**SW9012A**	**12/3/2015**	**12/6/2015**		**LACHAT_151206C**			**3153453**
Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual	
Cyanide	9.817	0.25	10	0.7961	90.2	75	125	10.53	7.01	20		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116639

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152147	15120067-001B	SAMP	PH_S	R116639	1	12/03/2015
3152148	15120067-001BDUP	DUP	PH_S	R116639	1	12/03/2015
3152149	15120067-002B	SAMP	PH_S	R116639	1	12/03/2015
3152150	15120067-003B	SAMP	PH_S	R116639	1	12/03/2015
3152151	15120067-004B	SAMP	PH_S	R116639	1	12/03/2015
3152152	15120067-005B	SAMP	PH_S	R116639	1	12/03/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-001BDUP	**2635-17-B01 (0-7)**	**DUP**	**pH Units**	**SW9045C**	**12/3/2015**	**12/3/2015**	**PH_151203B**	**3152148**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	8.07	0	0	0	0	0	0	8.06	0.124	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116611

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3151520	PMMBLK5 12/2/15	MBLK	PMOIST	R116611	1	12/03/2015
3151521	PMLCS-S5 12/2/15	LCS	PMOIST	R116611	1	12/03/2015
3151522	PMLCS-W5 12/2/15	LCS	PMOIST	R116611	1	12/03/2015
3151523	15120056-001B	SAMP	PMOIST	R116611	1	12/03/2015
3151524	15120056-002B	SAMP	PMOIST	R116611	1	12/03/2015
3151525	15120064-001B	SAMP	PMOIST	R116611	1	12/03/2015
3151526	15120064-001BDUP	DUP	PMOIST	R116611	1	12/03/2015
3151527	15120064-002B	SAMP	PMOIST	R116611	1	12/03/2015
3151528	15120064-003B	SAMP	PMOIST	R116611	1	12/03/2015
3151529	15120064-004B	SAMP	PMOIST	R116611	1	12/03/2015
3151530	15120064-005B	SAMP	PMOIST	R116611	1	12/03/2015
3151531	15120064-006B	SAMP	PMOIST	R116611	1	12/03/2015
3152395	15120067-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152396	15120067-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152397	15120067-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152398	15120067-004B	SAMP	PMOIST	R116611	1	12/04/2015
3152399	15120067-005B	SAMP	PMOIST	R116611	1	12/04/2015
3152400	15120068-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152401	15120068-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152402	15120068-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152403	15120068-004B	SAMP	PMOIST	R116611	1	12/04/2015
3152404	15120069-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152405	15120069-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152406	15120069-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152491	15120067-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152492	15120067-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152493	15120067-003B	SAMP	PSOLID	R116611	1	12/04/2015
3152494	15120067-004B	SAMP	PSOLID	R116611	1	12/04/2015
3152495	15120067-005B	SAMP	PSOLID	R116611	1	12/04/2015
3152496	15120068-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152497	15120068-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152498	15120068-003B	SAMP	PSOLID	R116611	1	12/04/2015
3152499	15120068-004B	SAMP	PSOLID	R116611	1	12/04/2015
3152500	15120069-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152501	15120069-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152502	15120069-003B	SAMP	PSOLID	R116611	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK5 12/2/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151520**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S5 12/2/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151521**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.38	0.200	5	0	87.6	80	120	0	0		*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120067
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

Wet Chemistry

BatchID: R116611

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W5 12/2/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151522**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.82	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120064-001BDUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151526**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	17.72	0.200	0	0	0	0	0	19.16	7.81	20	*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

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

Physical Site Location (address, incldуding number and street):
10 E. Roosevelt Road (ISGS #2635-18)

City: Villa Park State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860785° (Decimal Degrees) Longitude: -87.976984° (-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 (Illinois Route 38)

Latitude: 41.860785° Longitude: -87.976984°

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 2635-18-B01 was sampled within the construction zone adjacent to ISGS #2635-18 (Kappy's Restaurant). Refer to PSI Report for ISGS #2635-18 (Kappy's Restaurant) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120065.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	ISGS #2635-18 (Kappy's Restaurant)	Comparison Criteria					
BORING	**2635-18-B01**	**MACs**			**TACO**		
SAMPLE	2635-18-B01 (0-6)						
MATRIX	Soil						
DEPTH (feet)	0-6	**Most Stringent**	**Within an MSA**	**Within Chicago**	**Residential**	**Construction Worker**	**SCGIER**
pH	7.6						
VOCs (mg/kg)							
Toluene	**0.0062**	12	--	--	650	42	--
SVOCs (None Detected)							
Inorganics (mg/kg)							
Aluminum	**17,000**	--	--	--	--	--	--
Arsenic	**12** †	11.3	13	--	13	61	--
Barium	**110**	1,500	--	--	5,500	14,000	--
Beryllium	**1.1**	22	--	--	160	410	--
Calcium	**41,000**	--	--	--	--	--	--
Chromium	**24** †	21	--	--	230	690	--
Cobalt	**13**	20	--	--	4,700	12,000	--
Copper	**33**	2,900	--	--	2,900	8,200	--
Iron	**32,000** †m	15,000	15,900	--	--	--	--
Lead	**23**	107	--	--	400	700	--
Magnesium	**22,000**	325,000	--	--	--	730,000	--
Manganese	**400**	630	636	--	1,600	4,100	--
Mercury	**0.034**	0.89	--	--	10	0.1	--
Nickel	**36**	100	--	--	1,600	4,100	--
Potassium	**2,000**	--	--	--	--	--	--
Sodium	**190**	--	--	--	--	--	--
Vanadium	**30**	550	--	--	550	1,400	--
Zinc	**64**	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)							
Barium	**0.57**	--	--	--	--	--	2
Chromium	ND U	--	--	--	--	--	0.1
Iron	**3.4**	--	--	--	--	--	5
Manganese	**0.060**	--	--	--	--	--	0.15
SPLP Metals (Not Analyzed)							

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120065 Revision 0

RE: 1009341.0002.01, IL 38, DuPage County, IL

Dear Dean Tiebout:

STAT Analysis received 2 samples for the referenced project on 12/2/2015 5:55:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

STAT Analysis Corporation

Date: December 15, 2015

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120065 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120065-001A	2635-18-B01 (0-6)		12/2/2015 3:05:00 PM	12/2/2015
15120065-001B	2635-18-B01 (0-6)		12/2/2015 3:05:00 PM	12/2/2015

STAT Analysis Corporation

Date: *December 15, 2015*

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120065 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120065 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120065-001

Client Sample ID: 2635-18-B01 (0-6)
Collection Date: 12/2/2015 3:05:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/3/2015**		Analyst: **PS**
Acetone	ND	0.089		mg/Kg-dry	1	12/6/2015
Benzene	ND	0.0059		mg/Kg-dry	1	12/6/2015
Bromodichloromethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
Bromoform	ND	0.0059		mg/Kg-dry	1	12/6/2015
Bromomethane	ND	0.012		mg/Kg-dry	1	12/6/2015
2-Butanone	ND	0.089		mg/Kg-dry	1	12/6/2015
Carbon disulfide	ND	0.059		mg/Kg-dry	1	12/6/2015
Carbon tetrachloride	ND	0.0059		mg/Kg-dry	1	12/6/2015
Chlorobenzene	ND	0.0059		mg/Kg-dry	1	12/6/2015
Chloroethane	ND	0.012		mg/Kg-dry	1	12/6/2015
Chloroform	ND	0.0059		mg/Kg-dry	1	12/6/2015
Chloromethane	ND	0.012		mg/Kg-dry	1	12/6/2015
Dibromochloromethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
1,1-Dichloroethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
1,2-Dichloroethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
1,1-Dichloroethene	ND	0.0059		mg/Kg-dry	1	12/6/2015
cis-1,2-Dichloroethene	ND	0.0059		mg/Kg-dry	1	12/6/2015
trans-1,2-Dichloroethene	ND	0.0059		mg/Kg-dry	1	12/6/2015
1,2-Dichloropropane	ND	0.0059		mg/Kg-dry	1	12/6/2015
cis-1,3-Dichloropropene	ND	0.0024		mg/Kg-dry	1	12/6/2015
trans-1,3-Dichloropropene	ND	0.0024		mg/Kg-dry	1	12/6/2015
Ethylbenzene	ND	0.0059		mg/Kg-dry	1	12/6/2015
2-Hexanone	ND	0.024		mg/Kg-dry	1	12/6/2015
4-Methyl-2-pentanone	ND	0.024		mg/Kg-dry	1	12/6/2015
Methylene chloride	ND	0.012		mg/Kg-dry	1	12/6/2015
Methyl tert-butyl ether	ND	0.0059		mg/Kg-dry	1	12/6/2015
Styrene	ND	0.0059		mg/Kg-dry	1	12/6/2015
1,1,2,2-Tetrachloroethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
Tetrachloroethene	ND	0.0059		mg/Kg-dry	1	12/6/2015
Toluene	0.0062	0.0059		mg/Kg-dry	1	12/6/2015
1,1,1-Trichloroethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
1,1,2-Trichloroethane	ND	0.0059		mg/Kg-dry	1	12/6/2015
Trichloroethene	ND	0.0059		mg/Kg-dry	1	12/6/2015
Vinyl chloride	ND	0.0059		mg/Kg-dry	1	12/6/2015
Xylenes, Total	ND	0.018		mg/Kg-dry	1	12/6/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Acenaphthene	ND	0.043		mg/Kg-dry	1	12/4/2015
Acenaphthylene	ND	0.043		mg/Kg-dry	1	12/4/2015

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120065 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120065-001

Client Sample ID: 2635-18-B01 (0-6)
Collection Date: 12/2/2015 3:05:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Aniline	ND	0.44		mg/Kg-dry	1	12/4/2015
Anthracene	ND	0.043		mg/Kg-dry	1	12/4/2015
Benz(a)anthracene	ND	0.043		mg/Kg-dry	1	12/4/2015
Benzidine	ND	0.43		mg/Kg-dry	1	12/4/2015
Benzo(a)pyrene	ND	0.043		mg/Kg-dry	1	12/4/2015
Benzo(b)fluoranthene	ND	0.043		mg/Kg-dry	1	12/4/2015
Benzo(g,h,i)perylene	ND	0.043		mg/Kg-dry	1	12/4/2015
Benzo(k)fluoranthene	ND	0.043		mg/Kg-dry	1	12/4/2015
Benzoic acid	ND	1.1		mg/Kg-dry	1	12/4/2015
Benzyl alcohol	ND	0.22		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethoxy)methane	ND	0.22		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethyl)ether	ND	0.22		mg/Kg-dry	1	12/4/2015
Bis(2-ethylhexyl)phthalate	ND	1.1		mg/Kg-dry	1	12/4/2015
4-Bromophenyl phenyl ether	ND	0.22		mg/Kg-dry	1	12/4/2015
Butyl benzyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
Carbazole	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Chloroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Chloro-3-methylphenol	ND	0.43		mg/Kg-dry	1	12/4/2015
2-Chloronaphthalene	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Chlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Chlorophenyl phenyl ether	ND	0.22		mg/Kg-dry	1	12/4/2015
Chrysene	ND	0.043		mg/Kg-dry	1	12/4/2015
Dibenz(a,h)anthracene	ND	0.043		mg/Kg-dry	1	12/4/2015
Dibenzofuran	ND	0.22		mg/Kg-dry	1	12/4/2015
1,2-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
1,3-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
1,4-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
3,3´-Dichlorobenzidine	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4-Dichlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Diethyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4-Dimethylphenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Dimethyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
4,6-Dinitro-2-methylphenol	ND	0.43		mg/Kg-dry	1	12/4/2015
2,4-Dinitrophenol	ND	1.1		mg/Kg-dry	1	12/4/2015
2,4-Dinitrotoluene	ND	0.043		mg/Kg-dry	1	12/4/2015
2,6-Dinitrotoluene	ND	0.043		mg/Kg-dry	1	12/4/2015
Di-n-butyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015
Di-n-octyl phthalate	ND	0.22		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120065 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120065-001

Client Sample ID: 2635-18-B01 (0-6)
Collection Date: 12/2/2015 3:05:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Fluoranthene	ND	0.043		mg/Kg-dry	1	12/4/2015
Fluorene	ND	0.043		mg/Kg-dry	1	12/4/2015
Hexachlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
Hexachlorobutadiene	ND	0.22		mg/Kg-dry	1	12/4/2015
Hexachlorocyclopentadiene	ND	0.22		mg/Kg-dry	1	12/4/2015
Hexachloroethane	ND	0.22		mg/Kg-dry	1	12/4/2015
Indeno(1,2,3-cd)pyrene	ND	0.043		mg/Kg-dry	1	12/4/2015
Isophorone	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Methylnaphthalene	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Methylphenol	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Methylphenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Naphthalene	ND	0.043		mg/Kg-dry	1	12/4/2015
2-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
3-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/4/2015
2-Nitrophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
4-Nitrophenol	ND	0.43		mg/Kg-dry	1	12/4/2015
Nitrobenzene	ND	0.043		mg/Kg-dry	1	12/4/2015
N-Nitrosodi-n-propylamine	ND	0.043		mg/Kg-dry	1	12/4/2015
N-Nitrosodimethylamine	ND	0.22		mg/Kg-dry	1	12/4/2015
N-Nitrosodiphenylamine	ND	0.22		mg/Kg-dry	1	12/4/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.22		mg/Kg-dry	1	12/4/2015
Pentachlorophenol	ND	0.088		mg/Kg-dry	1	12/4/2015
Phenanthrene	ND	0.043		mg/Kg-dry	1	12/4/2015
Phenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Pyrene	ND	0.043		mg/Kg-dry	1	12/4/2015
Pyridine	ND	0.88		mg/Kg-dry	1	12/4/2015
1,2,4-Trichlorobenzene	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4,5-Trichlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
2,4,6-Trichlorophenol	ND	0.22		mg/Kg-dry	1	12/4/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Aluminum	17000	250		mg/Kg-dry	100	12/4/2015
Antimony	ND	2.5		mg/Kg-dry	10	12/4/2015
Arsenic	12	1.2		mg/Kg-dry	10	12/4/2015
Barium	110	1.2		mg/Kg-dry	10	12/4/2015
Beryllium	1.1	0.62		mg/Kg-dry	10	12/4/2015
Cadmium	ND	0.62		mg/Kg-dry	10	12/4/2015
Calcium	41000	75		mg/Kg-dry	10	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120065 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120065-001

Client Sample ID: 2635-18-B01 (0-6)
Collection Date: 12/2/2015 3:05:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Chromium	24	1.2		mg/Kg-dry	10	12/4/2015
Cobalt	13	1.2		mg/Kg-dry	10	12/4/2015
Copper	33	3.1		mg/Kg-dry	10	12/4/2015
Iron	32000	370		mg/Kg-dry	100	12/4/2015
Lead	23	0.62		mg/Kg-dry	10	12/4/2015
Magnesium	22000	37		mg/Kg-dry	10	12/4/2015
Manganese	400	1.2		mg/Kg-dry	10	12/4/2015
Nickel	36	1.2		mg/Kg-dry	10	12/4/2015
Potassium	2000	37		mg/Kg-dry	10	12/4/2015
Selenium	ND	1.2		mg/Kg-dry	10	12/4/2015
Silver	ND	1.2		mg/Kg-dry	10	12/4/2015
Sodium	190	75		mg/Kg-dry	10	12/4/2015
Thallium	ND	1.2		mg/Kg-dry	10	12/4/2015
Vanadium	30	1.2		mg/Kg-dry	10	12/4/2015
Zinc	64	6.2		mg/Kg-dry	10	12/4/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.57	0.050		mg/L	5	12/5/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	ND	0.10	*	mg/L	5	12/5/2015
Cadmium	ND	0.0050		mg/L	5	12/5/2015
Chromium	ND	0.010		mg/L	5	12/5/2015
Cobalt	ND	0.010		mg/L	5	12/5/2015
Iron	3.4	0.25		mg/L	5	12/5/2015
Lead	ND	0.0050		mg/L	5	12/5/2015
Manganese	0.060	0.010		mg/L	5	12/5/2015
Nickel	ND	0.020		mg/L	5	12/5/2015
Selenium	ND	0.010		mg/L	5	12/10/2015
Silver	ND	0.010		mg/L	5	12/5/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/5/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**
Mercury	0.034	0.026		mg/Kg-dry	1	12/3/2015

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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120065 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120065-001

Client Sample ID: 2635-18-B01 (0-6)
Collection Date: 12/2/2015 3:05:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**
Cyanide	ND	0.33		mg/Kg-dry	1	12/6/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/3/2015**		Analyst: **RW**
pH	7.6			pH Units	1	12/3/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	24.4	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	75.6	0.20	*	wt%	1	12/4/2015

Qualifiers:
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e-mail address: STATinfo@STATAnalysis.com ***AIHA, NVLAP and NELAP accredited***

CHAIN OF CUSTODY RECORD

Nº: 866226 **Page :** ____ **of** ____

Company: Ecology + Environment
Project Number: 160341.0002.01 Client Tracking No.:
Project Name: TL 38
Project Location: DuPage County, IL
Sampler(s): S. Coyle

Report To: Dean Tiebout Phone: 312 578 4243
Scott Cooper Fax: 312 578 4345
QC Level: 1 ___ 2 ___ 3 ___ 4 ___ e-mail: dtiebout@ene.com

P.O. No.:
Quote No.:

Turn Around: 10 days
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	Total TAL met.'s	Total TAL inorg.	PCB's	6/6 S.I.'s	Remarks	Lab No.:
2635-TE-B01 (0-6)	12-2-15	1525	S		x	HP	2	x	x	x	x	x	x		001
2635-TE-B02 (0-2)	12-2-15	1520	S		x	HP	2	x	x	x	x	x	x		002

Relinquished by: (Signature) Date/Time: 12-2-15/1525
Received by: (Signature) Date/Time: 12/2/15 15:25
Relinquished by: (Signature) Date/Time: 12/2/15 17:55
Received by: (Signature) Date/Time: 12/2/15 1755
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments:

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120065

Received on Ice: Yes [X] No [ ]
Temperature: 3.6 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E

Date and Time Received: 12/2/2015 5:55:00 PM

Work Order Number 15120065

Received by: DO

Checklist completed by: Signature 12/2/15 Date

Reviewed by: Initials 12/3/15 Date

Matrix:

Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 3.6 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120615-3	97.4	97.5	124	114				
VLCS120615-3	100	106	122	114				
VLCSD120615-3	102	105	119	112				
15120065-001A	75.0	95.9	128	116				
15120065-002A	94.5	100	130	119				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3153867	BFB120615-3	TUNE	BFB	R116698	1	12/06/2015 15:38
3153868	VSTD100	CCV	VOC_ENCORE+	R116698	1	12/06/2015 16:41
3153869	VBLK120615-3	MBLK	VOC_ENCORE+	R116698	1	12/06/2015 17:23
3153870	VLCS120615-3	LCS	VOC_ENCORE+	R116698	1	12/06/2015 17:59
3153871	VLCSD120615-3	LCSD	VOC_ENCORE+	R116698	1	12/06/2015 18:35
3153872	15120051-015A	RA	VOC_5035	88776	1	12/06/2015 19:41
3153873	15120051-016A	SAMP	VOC_5035	88776	1	12/06/2015 20:16
3153874	15120051-017A	SAMP	VOC_5035	88776	1	12/06/2015 20:52
3153875	15120079-011A	SAMP	VOC_ENCORE	88844	50000	12/06/2015 21:39
3153876	15120065-001A	SAMP	VOC_5035	88773	1	12/06/2015 22:14
3153877	15120065-002A	SAMP	VOC_5035	88773	1	12/06/2015 22:50
3153878	15120067-001A	SAMP	VOC_5035	88818	1	12/06/2015 23:26
3153880	15120067-002A	SAMP	VOC_5035	88818	1	12/07/2015 00:02
3153881	15120067-003A	SAMP	VOC_5035	88818	1	12/07/2015 00:37
3153883	15120067-004A	SAMP	VOC_5035	88818	1	12/07/2015 01:13
3153885	15120067-005A	SAMP	VOC_5035	88818	1	12/07/2015 01:48
3153887	15120079-011A	SAMP	VOC_ENCORE	88844	100	12/07/2015 02:24
3153892	15120079-016A	SAMP	VOC_ENCORE	88844	100	12/07/2015 02:59

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120615-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116698

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120615-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120615-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153870**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04838	0.0050	0.05	0	96.8	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04626	0.0050	0.05	0	92.5	70	130	0	0		
1,1,2-Trichloroethane	0.04619	0.0050	0.05	0	92.4	70	130	0	0		
1,1-Dichloroethane	0.04921	0.0050	0.05	0	98.4	70	130	0	0		
1,1-Dichloroethene	0.05061	0.0050	0.05	0	101	70	130	0	0		
1,2-Dichloroethane	0.04899	0.0050	0.05	0	98	70	130	0	0		
1,2-Dichloropropane	0.04644	0.0050	0.05	0	92.9	70	130	0	0		
2-Butanone	0.1111	0.075	0.1	0	111	70	130	0	0		
2-Hexanone	0.09931	0.020	0.1	0	99.3	70	130	0	0		
4-Methyl-2-pentanone	0.1087	0.020	0.1	0	109	70	130	0	0		
Acetone	0.1091	0.075	0.1	0	109	50	150	0	0		
Benzene	0.04578	0.0050	0.05	0	91.6	70	130	0	0		
Bromodichloromethane	0.04791	0.0050	0.05	0	95.8	70	130	0	0		
Bromoform	0.04802	0.0050	0.05	0	96	70	130	0	0		
Bromomethane	0.04712	0.010	0.05	0	94.2	70	130	0	0		
Carbon disulfide	0.1128	0.050	0.1	0	113	70	130	0	0		
Carbon tetrachloride	0.048	0.0050	0.05	0	96	70	130	0	0		
Chlorobenzene	0.04277	0.0050	0.05	0	85.5	70	130	0	0		
Chloroethane	0.05199	0.010	0.05	0	104	70	130	0	0		
Chloroform	0.0522	0.0050	0.05	0	104	70	130	0	0		
Chloromethane	0.04755	0.010	0.05	0	95.1	70	130	0	0		
cis-1,2-Dichloroethene	0.04793	0.0050	0.05	0	95.9	70	130	0	0		
cis-1,3-Dichloropropene	0.0458	0.0020	0.05	0	91.6	70	130	0	0		
Dibromochloromethane	0.04772	0.0050	0.05	0	95.4	70	130	0	0		
Ethylbenzene	0.04395	0.0050	0.05	0	87.9	70	130	0	0		
Methyl tert-butyl ether	0.05637	0.0050	0.05	0	113	70	130	0	0		
Methylene chloride	0.0492	0.010	0.05	0	98.4	70	130	0	0		
Styrene	0.04547	0.0050	0.05	0	90.9	70	130	0	0		
Tetrachloroethene	0.04344	0.0050	0.05	0	86.9	70	130	0	0		
Toluene	0.04642	0.0050	0.05	0	92.8	70	130	0	0		
trans-1,2-Dichloroethene	0.0548	0.0050	0.05	0	110	70	130	0	0		
trans-1,3-Dichloropropene	0.04582	0.0020	0.05	0	91.6	70	130	0	0		
Trichloroethene	0.04762	0.0050	0.05	0	95.2	70	130	0	0		
Vinyl chloride	0.04997	0.0050	0.05	0	99.9	70	130	0	0		
Xylenes, Total	0.1328	0.015	0.15	0	88.5	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116698

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120615-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/6/2015**	**VOA-3_151206A**	**3153871**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04673	0.0050	0.05	0	93.5	70	130	0.04838	3.47	20	
1,1,2,2-Tetrachloroethane	0.04585	0.0050	0.05	0	91.7	70	130	0.04626	0.890	20	
1,1,2-Trichloroethane	0.04584	0.0050	0.05	0	91.7	70	130	0.04619	0.761	20	
1,1-Dichloroethane	0.04705	0.0050	0.05	0	94.1	70	130	0.04921	4.49	20	
1,1-Dichloroethene	0.04726	0.0050	0.05	0	94.5	70	130	0.05061	6.85	20	
1,2-Dichloroethane	0.04719	0.0050	0.05	0	94.4	70	130	0.04899	3.74	20	
1,2-Dichloropropane	0.04567	0.0050	0.05	0	91.3	70	130	0.04644	1.67	20	
2-Butanone	0.1036	0.075	0.1	0	104	70	130	0.1111	6.99	20	
2-Hexanone	0.09948	0.020	0.1	0	99.5	70	130	0.09931	0.171	20	
4-Methyl-2-pentanone	0.1062	0.020	0.1	0	106	70	130	0.1087	2.31	20	
Acetone	0.1043	0.075	0.1	0	104	50	150	0.1091	4.46	20	
Benzene	0.04447	0.0050	0.05	0	88.9	70	130	0.04578	2.90	20	
Bromodichloromethane	0.04722	0.0050	0.05	0	94.4	70	130	0.04791	1.45	20	
Bromoform	0.04787	0.0050	0.05	0	95.7	70	130	0.04802	0.313	20	
Bromomethane	0.04342	0.010	0.05	0	86.8	70	130	0.04712	8.17	20	
Carbon disulfide	0.1048	0.050	0.1	0	105	70	130	0.1128	7.35	20	
Carbon tetrachloride	0.04731	0.0050	0.05	0	94.6	70	130	0.048	1.45	20	
Chlorobenzene	0.04221	0.0050	0.05	0	84.4	70	130	0.04277	1.32	20	
Chloroethane	0.0489	0.010	0.05	0	97.8	70	130	0.05199	6.13	20	
Chloroform	0.04858	0.0050	0.05	0	97.2	70	130	0.0522	7.18	20	
Chloromethane	0.04764	0.010	0.05	0	95.3	70	130	0.04755	0.189	20	
cis-1,2-Dichloroethene	0.0466	0.0050	0.05	0	93.2	70	130	0.04793	2.81	20	
cis-1,3-Dichloropropene	0.04479	0.0020	0.05	0	89.6	70	130	0.0458	2.23	20	
Dibromochloromethane	0.04666	0.0050	0.05	0	93.3	70	130	0.04772	2.25	20	
Ethylbenzene	0.04266	0.0050	0.05	0	85.3	70	130	0.04395	2.98	20	
Methyl tert-butyl ether	0.0544	0.0050	0.05	0	109	70	130	0.05637	3.56	20	
Methylene chloride	0.04591	0.010	0.05	0	91.8	70	130	0.0492	6.92	20	
Styrene	0.04501	0.0050	0.05	0	90	70	130	0.04547	1.02	20	
Tetrachloroethene	0.04225	0.0050	0.05	0	84.5	70	130	0.04344	2.78	20	
Toluene	0.04499	0.0050	0.05	0	90	70	130	0.04642	3.13	20	
trans-1,2-Dichloroethene	0.05261	0.0050	0.05	0	105	70	130	0.0548	4.08	20	
trans-1,3-Dichloropropene	0.04551	0.0020	0.05	0	91	70	130	0.04582	0.679	20	
Trichloroethene	0.0454	0.0050	0.05	0	90.8	70	130	0.04762	4.77	20	
Vinyl chloride	0.04856	0.0050	0.05	0	97.1	70	130	0.04997	2.86	20	
Xylenes, Total	0.132	0.015	0.15	0	88	70	130	0.1328	0.559	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
15110611-002BMS	44.7	48.0	44.4	71.6	40.3	43.2	58.0	63.9
15110611-002BMSD	42.8	46.6	41.6	80.7	40.0	41.4	57.3	77.0
15120065-001B	58.0	62.4	53.6	89.8	50.8	53.5	71.6	85.0
15120065-002B	60.8	65.1	56.8	96.1	53.8	57.3	77.1	90.8
MB-88783-SVOC	67.8	71.0	65.9	107	65.8	67.3	82.3	83.3
LCS-88783-SVOC	68.2	72.3	71.3	124 *	62.8	68.2	89.5	85.7

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88783-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
LCS-88783-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-002B	Soil		0.03024	0	0	1	33.069	12/3/2015	12/3/2015
15110611-010B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-012B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-020B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120064-001B	Soil		0.03019	0	0	1	33.124	12/3/2015	12/3/2015
15120064-002B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120064-003B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120064-004B	Soil		0.03005	0	0	1	33.278	12/3/2015	12/3/2015
15120064-005B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120064-006B	Soil		0.03003	0	0	1	33.300	12/3/2015	12/3/2015
15120065-001B	Soil		0.03018	0	0	1	33.135	12/3/2015	12/3/2015
15120065-002B	Soil		0.03003	0	0	1	33.300	12/3/2015	12/3/2015
15120067-001B	Soil		0.03007	0	0	1	33.256	12/3/2015	12/3/2015
15120067-002B	Soil		0.03035	0	0	1	32.949	12/3/2015	12/3/2015
15120067-003B	Soil		0.03022	0	0	1	33.091	12/3/2015	12/3/2015
15120067-004B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120067-005B	Soil		0.03026	0	0	1	33.047	12/3/2015	12/3/2015
15110611-002BMS	Soil		0.03023	0	0	1	33.080	12/3/2015	12/3/2015
15110611-002BMSD	Soil		0.03023	0	0	1	33.080	12/3/2015	12/3/2015
15120069-001B	Soil		0.03042	0	0	1	32.873	12/3/2015	12/3/2015
15120069-002B	Soil		0.03039	0	0	1	32.906	12/3/2015	12/3/2015
15120069-003B	Soil		0.03013	0	0	1	33.190	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88783

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									

Qualifiers:
ND - Not Detected at the Reporting Limit
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88783-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152367**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.404	0.033	1.667	0	84.2	37	134	0	0		
4-Chloro-3-methylphenol	2.853	0.33	3.333	0	85.6	29	134	0	0		
2-Chlorophenol	2.346	0.17	3.333	0	70.4	29	105	0	0		
1,4-Dichlorobenzene	1.204	0.17	1.667	0	72.2	26	111	0	0		
2,4-Dinitrotoluene	1.584	0.033	1.667	0	95	46	125	0	0		
4-Nitrophenol	3.012	0.33	3.333	0	90.4	12	146	0	0		
N-Nitrosodi-n-propylamine	1.135	0.033	1.667	0	68.1	29	109	0	0		
Pentachlorophenol	3.613	0.067	3.333	0	108	10	192	0	0		
Phenol	2.224	0.17	3.333	0	66.7	27	104	0	0		
Pyrene	1.399	0.033	1.667	0	83.9	42	148	0	0		
1,2,4-Trichlorobenzene	1.366	0.17	1.667	0	81.9	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-002BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-5_151204A**	**3152572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.161	0.040	2.003	0	58	24	139	0	0		
4-Chloro-3-methylphenol	2.239	0.40	4.004	0	55.9	28	121	0	0		
2-Chlorophenol	1.855	0.20	4.004	0	46.3	21	102	0	0		
1,4-Dichlorobenzene	0.9567	0.20	2.003	0	47.8	27	95	0	0		
2,4-Dinitrotoluene	1.244	0.040	2.003	0	62.1	32	127	0	0		
4-Nitrophenol	2.439	0.40	4.004	0	60.9	10	156	0	0		
N-Nitrosodi-n-propylamine	0.8154	0.040	2.003	0	40.7	16	122	0	0		
Pentachlorophenol	2.706	0.080	4.004	0	67.6	10	204	0	0		
Phenol	1.728	0.20	4.004	0	43.2	20	103	0	0		
Pyrene	1.299	0.040	2.003	0	64.8	10	184	0	0		
1,2,4-Trichlorobenzene	1.064	0.20	2.003	0	53.1	55	106	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-002BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-5_151204A**	**3152593**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.215	0.040	2.003	0	60.7	24	139	1.161	4.52	57	
4-Chloro-3-methylphenol	2.294	0.40	4.004	0	57.3	28	121	2.239	2.44	88	
2-Chlorophenol	1.759	0.20	4.004	0	43.9	21	102	1.855	5.30	49	
1,4-Dichlorobenzene	0.9672	0.20	2.003	0	48.3	27	95	0.9567	1.08	43	
2,4-Dinitrotoluene	1.433	0.040	2.003	0	71.5	32	127	1.244	14.1	37	
4-Nitrophenol	2.852	0.40	4.004	0	71.2	10	156	2.439	15.6	56	
N-Nitrosodi-n-propylamine	0.7849	0.040	2.003	0	39.2	16	122	0.8154	3.80	47	
Pentachlorophenol	3.237	0.080	4.004	0	80.8	10	204	2.706	17.9	47	
Phenol	1.62	0.20	4.004	0	40.5	20	103	1.728	6.48	66	
Pyrene	1.533	0.040	2.003	0	76.5	10	184	1.299	16.5	51	
1,2,4-Trichlorobenzene	1.009	0.20	2.003	0	50.4	55	106	1.064	5.37	23	S

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88809

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
ILCSS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
15110611-006B	Soil		1.049	0	0	50	47.664	12/4/2015	12/4/2015
15110611-006BMS	Soil		1.043	0	0	50	47.939	12/4/2015	12/4/2015
15110611-006BMSD	Soil		1.047	0	0	50	47.755	12/4/2015	12/4/2015
15110611-010B	Soil		1.035	0	0	50	48.309	12/4/2015	12/4/2015
15120068-001B	Soil		1.08	0	0	50	46.296	12/4/2015	12/4/2015
15120068-002B	Soil		1.089	0	0	50	45.914	12/4/2015	12/4/2015
15120068-003B	Soil		1.051	0	0	50	47.574	12/4/2015	12/4/2015
15120068-004B	Soil		1.052	0	0	50	47.529	12/4/2015	12/4/2015
15120069-001B	Soil		1.05	0	0	50	47.619	12/4/2015	12/4/2015
15120069-002B	Soil		1.055	0	0	50	47.393	12/4/2015	12/4/2015
15120069-003B	Soil		1.075	0	0	50	46.512	12/4/2015	12/4/2015
15120065-001B	Soil		1.063	0	0	50	47.037	12/4/2015	12/4/2015
15120065-002B	Soil		1.012	0	0	50	49.407	12/4/2015	12/4/2015
15120067-001B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120067-002B	Soil		1.013	0	0	50	49.358	12/4/2015	12/4/2015
15120067-003B	Soil		1.072	0	0	50	46.642	12/4/2015	12/4/2015
15120067-004B	Soil		1.065	0	0	50	46.948	12/4/2015	12/4/2015
15120067-005B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120144-001B	Soil		1.082	0	0	50	46.211	12/4/2015	12/4/2015
15120144-002B	Soil		1.069	0	0	50	46.773	12/4/2015	12/4/2015
15120144-003B	Soil		1.01	0	0	50	49.505	12/4/2015	12/4/2015
15120145-001B	Soil		1.092	0	0	50	45.788	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	1.498	1.0									
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.0515	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	0.0215	0.25									J
Sodium	ND	30									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.032	0.50									J
Vanadium	ND	0.50									
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152979**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	23.34	10	25	0	93.4	80	120	0	0		
Arsenic	24.22	0.50	25	0	96.9	80	120	0	0		
Beryllium	24.28	0.25	25	0	97.1	80	120	0	0		
Cadmium	25.26	0.25	25	0	101	80	120	0	0		
Chromium	24.26	0.50	25	0	97.1	80	120	0	0		
Cobalt	24.18	0.50	25	0	96.7	80	120	0	0		
Iron	97.7	15	100	0	97.7	80	120	0	0		
Lead	25.04	0.25	25	0.0515	99.9	80	120	0	0		
Magnesium	92	15	100	0	92	80	120	0	0		
Manganese	24.37	0.50	25	0	97.5	80	120	0	0		
Nickel	23.45	0.50	25	0	93.8	80	120	0	0		
Potassium	95.5	15	100	0	95.5	80	120	0	0		
Selenium	22.84	0.25	25	0	91.3	80	120	0	0		
Silver	10.57	0.25	10	0.0215	105	80	120	0	0		
Vanadium	23.9	0.50	25	0	95.6	80	120	0	0		
Zinc	20.64	2.5	25	0	82.6	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154062**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	19.57	1.0	12.5	1.498	145	80	120	0	0		BS
Barium	27.12	0.50	25	0	108	80	120	0	0		
Calcium	97.1	30	100	0	97.1	80	120	0	0		
Copper	24.55	1.2	25	0	98.2	80	120	0	0		
Sodium	94.4	30	100	0	94.4	80	120	0	0		
Thallium	24.84	0.50	25	0.032	99.2	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	799.6	23	28.84	716.4	288	75	125	0	0		S
Arsenic	31.15	1.2	28.84	0.6849	106	75	125	0	0		
Beryllium	29.58	0.58	28.84	0.08776	102	75	125	0	0		
Cadmium	30.38	0.58	28.84	0	105	75	125	0	0		
Chromium	31.49	1.2	28.84	1.393	104	75	125	0	0		
Cobalt	31.21	1.2	28.84	1.387	103	75	125	0	0		
Iron	2021	35	115.4	1834	163	75	125	0	0		S
Lead	33.34	0.58	28.84	1.892	109	75	125	0	0		
Magnesium	3462	35	115.4	3189	237	75	125	0	0		S
Manganese	54.9	1.2	28.84	23.45	109	75	125	0	0		
Nickel	31.18	1.2	28.84	2.191	101	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Potassium	262.5	35	115.4	134	111	75	125	0	0		
Selenium	29.78	0.58	28.84	0	103	75	125	0	0		
Silver	12.58	0.58	11.54	0.05392	109	75	125	0	0		
Vanadium	32.45	1.2	28.84	2.302	105	75	125	0	0		
Zinc	32.12	5.8	28.84	4.955	94.2	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153571**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	33.19	1.2	28.84	2.77	105	75	125	0	0		
Calcium	6080	69	115.4	5799	244	75	125	0	0		S
Copper	28.86	2.9	28.84	0	100	75	125	0	0		
Iron	1924	35	115.4	1870	46.3	75	125	0	0		S
Sodium	135	69	115.4	0	117	75	125	0	0		
Thallium	27.61	1.2	28.84	0	95.7	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152983**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	769.5	23	28.73	716.4	185	75	125	799.6	3.83	20	S
Arsenic	29.82	1.1	28.73	0.6849	101	75	125	31.15	4.37	20	
Beryllium	28.49	0.57	28.73	0.08776	98.8	75	125	29.58	3.77	20	
Cadmium	29.43	0.57	28.73	0	102	75	125	30.38	3.16	20	
Chromium	29.88	1.1	28.73	1.393	99.2	75	125	31.49	5.24	20	
Cobalt	29	1.1	28.73	1.387	96.1	75	125	31.21	7.33	20	
Iron	1887	34	114.9	1834	46.5	75	125	2021	6.86	20	S
Lead	30.96	0.57	28.73	1.892	101	75	125	33.34	7.40	20	
Magnesium	3212	34	114.9	3189	19.8	75	125	3462	7.51	20	S
Manganese	52.05	1.1	28.73	23.45	99.5	75	125	54.9	5.33	20	
Nickel	29.6	1.1	28.73	2.191	95.4	75	125	31.18	5.19	20	
Potassium	251.7	34	114.9	134	102	75	125	262.5	4.19	20	
Selenium	27.83	0.57	28.73	0	96.8	75	125	29.78	6.78	20	
Silver	11.92	0.57	11.49	0.05392	103	75	125	12.58	5.32	20	
Vanadium	30.31	1.1	28.73	2.302	97.5	75	125	32.45	6.82	20	
Zinc	30.28	5.7	28.73	4.955	88.1	75	125	32.12	5.90	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	31.52	1.1	28.73	2.77	100	75	125	35.44	11.7	20	
Calcium	5804	69	114.9	5799	4.64	75	125	6253	7.45	20	S
Copper	27.72	2.9	28.73	0	96.5	75	125	30.06	8.08	20	
Iron	1869	34	114.9	1870	-1.39	75	125	2021	7.84	20	S
Sodium	128.3	69	114.9	0	112	75	125	150.2	15.7	20	
Thallium	26.77	1.1	28.73	0	93.2	75	125	29.96	11.3	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTA1 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTB 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153663**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00252	0.015									J
Barium	0.00723	0.050									J
Beryllium	0.00133	0.0050									J
Boron	ND	0.20									*
Cadmium	ND	0.0050									
Chromium	0.00263	0.010									J
Cobalt	ND	0.010									
Iron	ND	0.25									
Lead	0.00622	0.0050									
Manganese	ND	0.010									
Nickel	0.00163	0.020									J
Selenium	0.02254	0.010									
Silver	0.00136	0.010									J
Thallium	0.00532	0.0050									
Zinc	ND	0.050									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3818	0.015	0.25	0	153	75	125	0	0		S
Barium	0.7309	0.050	0.5	0.2486	96.5	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Beryllium	0.4595	0.0050	0.5	0	91.9	75	125	0	0		
Boron	0.5382	0.20	0.5	0.07279	93.1	75	125	0	0		*
Cadmium	0.4657	0.0050	0.5	0.00168	92.8	75	125	0	0		
Chromium	0.4769	0.010	0.5	0	95.4	75	125	0	0		
Iron	8.144	0.25	2	6.457	84.4	75	125	0	0		
Lead	0.5213	0.0050	0.5	0.0039	103	75	125	0	0		
Manganese	2.325	0.010	0.5	1.963	72.4	75	125	0	0		S
Nickel	0.4481	0.020	0.5	0.02373	84.9	75	125	0	0		
Selenium	0.5055	0.010	0.5	0	101	75	125	0	0		
Silver	0.1895	0.010	0.2	0	94.8	75	125	0	0		
Zinc	0.379	0.050	0.5	0	75.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-002AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153684**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3956	0.015	0.25	0	158	75	125	0	0		S
Barium	0.696	0.050	0.5	0.2229	94.6	75	125	0	0		
Beryllium	0.4479	0.0050	0.5	0.00138	89.3	75	125	0	0		
Boron	0.5084	0.20	0.5	0.07339	87	75	125	0	0		*
Cadmium	0.4504	0.0050	0.5	0	90.1	75	125	0	0		
Chromium	0.4579	0.010	0.5	0.00555	90.5	75	125	0	0		
Cobalt	0.4391	0.010	0.5	0	87.8	75	125	0	0		
Iron	3.131	0.25	2	1.601	76.5	75	125	0	0		
Lead	0.4866	0.0050	0.5	0.00443	96.4	75	125	0	0		
Manganese	0.5423	0.010	0.5	0.1063	87.2	75	125	0	0		
Nickel	0.4152	0.020	0.5	0.00456	82.1	75	125	0	0		
Selenium	0.4716	0.010	0.5	0	94.3	75	125	0	0		
Silver	0.1838	0.010	0.2	0	91.9	75	125	0	0		
Thallium	0.4604	0.0050	0.5	0	92.1	75	125	0	0		
Zinc	0.3813	0.050	0.5	0	76.3	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154070**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4886	0.010	0.5	0.01341	95	75	125	0	0		
Thallium	0.5081	0.0050	0.5	0	102	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3877	0.015	0.25	0	155	75	125	0.3818	1.53	20	S
Barium	0.7407	0.050	0.5	0.2486	98.4	75	125	0.7309	1.33	20	
Beryllium	0.458	0.0050	0.5	0	91.6	75	125	0.4595	0.327	20	
Boron	0.5514	0.20	0.5	0.07279	95.7	75	125	0.5382	2.42	20	*
Cadmium	0.4794	0.0050	0.5	0.00168	95.5	75	125	0.4657	2.90	20	
Chromium	0.49	0.010	0.5	0	98	75	125	0.4769	2.71	20	
Iron	8.216	0.25	2	6.457	88	75	125	8.144	0.880	20	
Lead	0.5285	0.0050	0.5	0.0039	105	75	125	0.5213	1.37	20	

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H/HT - Holding Time Exceeded
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E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	2.369	0.010	0.5	1.963	81.2	75	125	2.325	1.87	20	
Nickel	0.4567	0.020	0.5	0.02373	86.6	75	125	0.4481	1.90	20	
Selenium	0.5075	0.010	0.5	0	102	75	125	0.5055	0.395	20	
Silver	0.1933	0.010	0.2	0	96.7	75	125	0.1895	1.99	20	
Zinc	0.3905	0.050	0.5	0	78.1	75	125	0.379	2.99	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154071**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4877	0.010	0.5	0.01341	94.9	75	125	0.4886	0.184	20	
Thallium	0.5063	0.0050	0.5	0	101	75	125	0.5081	0.355	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153661**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00191	0.0060									J
Barium	ND	0.0040									
Beryllium	0.00045	0.0020									J
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	0.02087	0.10									J
Lead	0.00037	0.0020									J
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.00291	0.0040									J
Silver	0.00054	0.0040									J
Thallium	ND	0.0020									
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153662**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3925	0.0060	0.25	0.00191	156	80	120	0	0		S
Barium	0.4838	0.0040	0.5	0	96.8	80	120	0	0		
Beryllium	0.493	0.0020	0.5	0.00045	98.5	80	120	0	0		
Boron	0.4585	0.080	0.5	0	91.7	80	120	0	0		
Cadmium	0.5143	0.0020	0.5	0	103	80	120	0	0		
Chromium	0.4788	0.0040	0.5	0	95.8	80	120	0	0		
Cobalt	0.4756	0.0040	0.5	0	95.1	80	120	0	0		
Iron	1.939	0.10	2	0.02087	95.9	80	120	0	0		
Lead	0.5226	0.0020	0.5	0.00037	104	80	120	0	0		
Manganese	0.4849	0.0040	0.5	0	97	80	120	0	0		
Nickel	0.46	0.0040	0.5	0	92	80	120	0	0		
Selenium	0.5162	0.0040	0.5	0.00291	103	80	120	0	0		
Silver	0.213	0.0040	0.2	0.00054	106	80	120	0	0		
Zinc	0.4505	0.020	0.5	0	90.1	80	120	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/10/2015**	**ICPMS_151210B**	**3157568**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.4924	0.010	0.5	0	98.5	80	120	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88800

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
HGLCSS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
15120065-001B	Soil		0.302	0	0	30	99.338	12/3/2015	12/3/2015
15120065-002B	Soil		0.346	0	0	30	86.705	12/3/2015	12/3/2015
15120067-001B	Soil		0.366	0	0	30	81.967	12/3/2015	12/3/2015
15120067-002B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120067-003B	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-003BMS	Soil		0.306	0	0	30	98.039	12/3/2015	12/3/2015
15120067-003BMSD	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-004B	Soil		0.358	0	0	30	83.799	12/3/2015	12/3/2015
15120067-005B	Soil		0.334	0	0	30	89.820	12/3/2015	12/3/2015
15120068-001B	Soil		0.336	0	0	30	89.286	12/3/2015	12/3/2015
15120068-002B	Soil		0.37	0	0	30	81.081	12/3/2015	12/3/2015
15120068-003B	Soil		0.307	0	0	30	97.720	12/3/2015	12/3/2015
15120068-004B	Soil		0.328	0	0	30	91.463	12/3/2015	12/3/2015
15120069-001B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120069-002B	Soil		0.32	0	0	30	93.750	12/3/2015	12/3/2015
15120069-003B	Soil		0.351	0	0	30	85.470	12/3/2015	12/3/2015
15120106-001B	Soil		0.313	0	0	30	95.847	12/4/2015	12/4/2015
15120107-001B	Soil		0.331	0	0	30	90.634	12/4/2015	12/4/2015
15120109-001B	Soil		0.33	0	0	30	90.909	12/4/2015	12/4/2015
15120109-002B	Soil		0.308	0	0	30	97.403	12/4/2015	12/4/2015
15120109-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120109-004B	Soil		0.319	0	0	30	94.044	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS1 12/3/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS1 12/3/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152172**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.3214	0.023	0.287	0.02606	103	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152173**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2946	0.022	0.2833	0.02606	94.8	75	125	0.3214	8.70	20	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTB 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156540**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0026	0.00020	0.0025	0	104	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156551**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0029	0.00020	0.0025	0	116	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156552**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0029	3.51	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW2 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156532**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156534**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Qualifiers:
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CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW2 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156533**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88788

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
TCNLCSS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMS	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMSD	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-005B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-006B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS1 120315	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151856**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.1433	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS1 120315	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151857**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.43	0.25	10	0.1433	103	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	9.369	0.26	10.43	0.2084	87.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151860**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.26	10.43	0.2084	97.4	75	125	9.369	10.1	20	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116638

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152127	15120051-001A	SAMP	PH_S	R116638	1	12/03/2015
3152128	15120051-004A	SAMP	PH_S	R116638	1	12/03/2015
3152129	15120051-007B	SAMP	PH_S	R116638	1	12/03/2015
3152130	15120051-009B	SAMP	PH_S	R116638	1	12/03/2015
3152131	15120051-011B	SAMP	PH_S	R116638	1	12/03/2015
3152132	15120051-013B	SAMP	PH_S	R116638	1	12/03/2015
3152133	15120051-014A	SAMP	PH_S	R116638	1	12/03/2015
3152134	15120051-015B	SAMP	PH_S	R116638	1	12/03/2015
3152135	15120051-016B	SAMP	PH_S	R116638	1	12/03/2015
3152136	15120051-017B	SAMP	PH_S	R116638	1	12/03/2015
3152137	15120065-001B	SAMP	PH_S	R116638	1	12/03/2015
3152138	15120065-002B	SAMP	PH_S	R116638	1	12/03/2015
3152139	15120068-001B	SAMP	PH_S	R116638	1	12/03/2015
3152140	15120068-001BDUP	DUP	PH_S	R116638	1	12/03/2015
3152141	15120068-002B	SAMP	PH_S	R116638	1	12/03/2015
3152142	15120068-003B	SAMP	PH_S	R116638	1	12/03/2015
3152143	15120068-004B	SAMP	PH_S	R116638	1	12/03/2015
3152144	15120069-001B	SAMP	PH_S	R116638	1	12/03/2015
3152145	15120069-002B	SAMP	PH_S	R116638	1	12/03/2015
3152146	15120069-003B	SAMP	PH_S	R116638	1	12/03/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-001BDUP	**ZZZZZ**	**DUP**	**pH Units**	**SW9045C**	**12/3/2015**	**12/3/2015**	**PH_151203A**	**3152140**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	7.74	0	0	0	0	0	0	7.73	0.129	20	

Qualifiers:
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120065
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116648

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152414	PMMBLK 12/3/15	MBLK	PMOIST	R116648	1	12/04/2015
3152415	PMLCS-S 12/3/15	LCS	PMOIST	R116648	1	12/04/2015
3152416	PMLCS-W 12/3/15	LCS	PMOIST	R116648	1	12/04/2015
3152417	15120065-001B	SAMP	PMOIST	R116648	1	12/04/2015
3152418	15120065-002B	SAMP	PMOIST	R116648	1	12/04/2015
3152419	15120079-001A	SAMP	PMOIST	R116648	1	12/04/2015
3152420	15120079-002A	SAMP	PMOIST	R116648	1	12/04/2015
3152421	15120079-003A	SAMP	PMOIST	R116648	1	12/04/2015
3152422	15120079-004A	SAMP	PMOIST	R116648	1	12/04/2015
3152423	15120079-005B	SAMP	PMOIST	R116648	1	12/04/2015
3152424	15120079-006B	SAMP	PMOIST	R116648	1	12/04/2015
3152426	15120079-007A	SAMP	PMOIST	R116648	1	12/04/2015
3152427	15120079-008A	SAMP	PMOIST	R116648	1	12/04/2015
3152428	15120079-009A	SAMP	PMOIST	R116648	1	12/04/2015
3152429	15120079-010A	SAMP	PMOIST	R116648	1	12/04/2015
3152430	15120079-010ADUP	DUP	PMOIST	R116648	1	12/04/2015
3152431	15120079-019B	SAMP	PMOIST	R116648	1	12/04/2015
3152432	15120079-020B	SAMP	PMOIST	R116648	1	12/04/2015
3152433	15120079-021B	SAMP	PMOIST	R116648	1	12/04/2015
3152434	15120079-022B	SAMP	PMOIST	R116648	1	12/04/2015
3152435	15120084-001B	SAMP	PMOIST	R116648	1	12/04/2015
3152519	15120065-001B	SAMP	PSOLID	R116648	1	12/04/2015
3152520	15120065-002B	SAMP	PSOLID	R116648	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK 12/3/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203A**	**3152414**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203A**	**3152415**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.63	0.200	5	0	92.6	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203A**	**3152416**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.84	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120079-010ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203A**	**3152430**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	18.92	0.200	0	0	0	0	0	19.22	1.57	20	*

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E - Value above quantitation range

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

Physical Site Location (address, inclduding number and street):
1 W. Roosevelt Road (ISGS #2635-19)

City: Villa Park State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860012° (Decimal Degrees) Longitude: -87.978424° (-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 (Illinois Route 38)

Latitude: 41.860012° Longitude: -87.978424°

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 2635-19-B03 was sampled within the construction zone adjacent to ISGS #2635-19 (Standard Bank). Refer to PSI Report for ISGS #2635-19 (Standard Bank) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120094.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	ISGS #2635-19 (Standard Bank)		Comparison Criteria					
BORING	2635-19-B03		MACs			TACO		
SAMPLE	2635-19-B03 (0-2)							
MATRIX	Soil							
DEPTH (feet)	0-2		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
pH	7.4							
VOCs (None Detected)								
SVOCs (mg/kg)								
Benzo(a)anthracene	**0.042**		0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	**0.049**		0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	**0.053**		0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	**0.040**		--	--	--	--	--	--
Chrysene	**0.053**		88	--	--	88	17,000	--
Fluoranthene	**0.10**		3,100	--	--	3,100	82,000	--
Phenanthrene	**0.048**		--	--	--	--	--	--
Pyrene	**0.078**		2,300	--	--	2,300	61,000	--
Inorganics (mg/kg)								
Aluminum	**15,000**		--	--	--	--	--	--
Arsenic	**12**	†	11.3	13	--	13	61	--
Barium	**110**		1,500	--	--	5,500	14,000	--
Beryllium	**0.74**		22	--	--	160	410	--
Calcium	**33,000**		--	--	--	--	--	--
Chromium	**21**		21	--	--	230	690	--
Cobalt	**15**		20	--	--	4,700	12,000	--
Copper	**25**		2,900	--	--	2,900	8,200	--
Iron	**32,000**	†m	15,000	15,900	--	--	--	--
Lead	**36**		107	--	--	400	700	--
Magnesium	**18,000**		325,000	--	--	--	730,000	--
Manganese	**730**	†m	630	636	--	1,600	4,100	--
Mercury	**0.029**		0.89	--	--	10	0.1	--
Nickel	**30**		100	--	--	1,600	4,100	--
Potassium	**1,900**		--	--	--	--	--	--
Sodium	**74**		--	--	--	--	--	--
Vanadium	**29**		550	--	--	550	1,400	--
Zinc	**57**	J	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)								
Barium	**0.40**		--	--	--	--	--	2
Iron	ND	U	--	--	--	--	--	5
Manganese	**0.066**		--	--	--	--	--	0.15
SPLP Metals (Not Analyzed)								

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120094 Revision 0

RE: 1009341.0002.01, IL 38, DuPage Co, IL

Dear Dean Tiebout:

STAT Analysis received 5 samples for the referenced project on 12/3/2015 5:14:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

STAT Analysis Corporation

Date: December 15, 2015

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Work Order: 15120094 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120094-004A	2635-19-B03 (0-2)		12/3/2015 9:45:00 AM	12/3/2015
15120094-004B	2635-19-B03 (0-2)		12/3/2015 9:45:00 AM	12/3/2015

STAT Analysis Corporation

Date: *December 15, 2015*

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Work Order: 15120094 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120094 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120094-004

Client Sample ID: 2635-19-B03 (0-2)
Collection Date: 12/3/2015 9:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/4/2015**		Analyst: **JNM**
Acetone	ND	0.069		mg/Kg-dry	1	12/8/2015
Benzene	ND	0.0046		mg/Kg-dry	1	12/8/2015
Bromodichloromethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
Bromoform	ND	0.0046		mg/Kg-dry	1	12/8/2015
Bromomethane	ND	0.0092		mg/Kg-dry	1	12/8/2015
2-Butanone	ND	0.069		mg/Kg-dry	1	12/8/2015
Carbon disulfide	ND	0.046		mg/Kg-dry	1	12/8/2015
Carbon tetrachloride	ND	0.0046		mg/Kg-dry	1	12/8/2015
Chlorobenzene	ND	0.0046		mg/Kg-dry	1	12/8/2015
Chloroethane	ND	0.0092		mg/Kg-dry	1	12/8/2015
Chloroform	ND	0.0046		mg/Kg-dry	1	12/8/2015
Chloromethane	ND	0.0092		mg/Kg-dry	1	12/8/2015
Dibromochloromethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,1-Dichloroethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,2-Dichloroethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,1-Dichloroethene	ND	0.0046		mg/Kg-dry	1	12/8/2015
cis-1,2-Dichloroethene	ND	0.0046		mg/Kg-dry	1	12/8/2015
trans-1,2-Dichloroethene	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,2-Dichloropropane	ND	0.0046		mg/Kg-dry	1	12/8/2015
cis-1,3-Dichloropropene	ND	0.0018		mg/Kg-dry	1	12/8/2015
trans-1,3-Dichloropropene	ND	0.0018		mg/Kg-dry	1	12/8/2015
Ethylbenzene	ND	0.0046		mg/Kg-dry	1	12/8/2015
2-Hexanone	ND	0.018		mg/Kg-dry	1	12/8/2015
4-Methyl-2-pentanone	ND	0.018		mg/Kg-dry	1	12/8/2015
Methylene chloride	ND	0.0092		mg/Kg-dry	1	12/8/2015
Methyl tert-butyl ether	ND	0.0046		mg/Kg-dry	1	12/8/2015
Styrene	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,1,2,2-Tetrachloroethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
Tetrachloroethene	ND	0.0046		mg/Kg-dry	1	12/8/2015
Toluene	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,1,1-Trichloroethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
1,1,2-Trichloroethane	ND	0.0046		mg/Kg-dry	1	12/8/2015
Trichloroethene	ND	0.0046		mg/Kg-dry	1	12/8/2015
Vinyl chloride	ND	0.0046		mg/Kg-dry	1	12/8/2015
Xylenes, Total	ND	0.014		mg/Kg-dry	1	12/8/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Acenaphthene	ND	0.040		mg/Kg-dry	1	12/8/2015
Acenaphthylene	ND	0.040		mg/Kg-dry	1	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120094 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120094-004

Client Sample ID: 2635-19-B03 (0-2)
Collection Date: 12/3/2015 9:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Aniline	ND	0.40		mg/Kg-dry	1	12/8/2015
Anthracene	ND	0.040		mg/Kg-dry	1	12/8/2015
Benz(a)anthracene	0.042	0.040		mg/Kg-dry	1	12/8/2015
Benzidine	ND	0.40		mg/Kg-dry	1	12/8/2015
Benzo(a)pyrene	0.049	0.040		mg/Kg-dry	1	12/8/2015
Benzo(b)fluoranthene	0.053	0.040		mg/Kg-dry	1	12/8/2015
Benzo(g,h,i)perylene	0.040	0.040		mg/Kg-dry	1	12/8/2015
Benzo(k)fluoranthene	ND	0.040		mg/Kg-dry	1	12/8/2015
Benzoic acid	ND	1.0		mg/Kg-dry	1	12/8/2015
Benzyl alcohol	ND	0.21		mg/Kg-dry	1	12/8/2015
Bis(2-chloroethoxy)methane	ND	0.21		mg/Kg-dry	1	12/8/2015
Bis(2-chloroethyl)ether	ND	0.21		mg/Kg-dry	1	12/8/2015
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg-dry	1	12/8/2015
4-Bromophenyl phenyl ether	ND	0.21		mg/Kg-dry	1	12/8/2015
Butyl benzyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
Carbazole	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Chloroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Chloro-3-methylphenol	ND	0.40		mg/Kg-dry	1	12/8/2015
2-Chloronaphthalene	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Chlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Chlorophenyl phenyl ether	ND	0.21		mg/Kg-dry	1	12/8/2015
Chrysene	0.053	0.040		mg/Kg-dry	1	12/8/2015
Dibenz(a,h)anthracene	ND	0.040		mg/Kg-dry	1	12/8/2015
Dibenzofuran	ND	0.21		mg/Kg-dry	1	12/8/2015
1,2-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
1,3-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
1,4-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
3,3´-Dichlorobenzidine	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4-Dichlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Diethyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4-Dimethylphenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Dimethyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
4,6-Dinitro-2-methylphenol	ND	0.40		mg/Kg-dry	1	12/8/2015
2,4-Dinitrophenol	ND	1.0		mg/Kg-dry	1	12/8/2015
2,4-Dinitrotoluene	ND	0.040		mg/Kg-dry	1	12/8/2015
2,6-Dinitrotoluene	ND	0.040		mg/Kg-dry	1	12/8/2015
Di-n-butyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
Di-n-octyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120094 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120094-004

Client Sample ID: 2635-19-B03 (0-2)
Collection Date: 12/3/2015 9:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Fluoranthene	0.10	0.040		mg/Kg-dry	1	12/8/2015
Fluorene	ND	0.040		mg/Kg-dry	1	12/8/2015
Hexachlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
Hexachlorobutadiene	ND	0.21		mg/Kg-dry	1	12/8/2015
Hexachlorocyclopentadiene	ND	0.21		mg/Kg-dry	1	12/8/2015
Hexachloroethane	ND	0.21		mg/Kg-dry	1	12/8/2015
Indeno(1,2,3-cd)pyrene	ND	0.040		mg/Kg-dry	1	12/8/2015
Isophorone	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Methylnaphthalene	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Methylphenol	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Methylphenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Naphthalene	ND	0.040		mg/Kg-dry	1	12/8/2015
2-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
3-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Nitrophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Nitrophenol	ND	0.40		mg/Kg-dry	1	12/8/2015
Nitrobenzene	ND	0.040		mg/Kg-dry	1	12/8/2015
N-Nitrosodi-n-propylamine	ND	0.040		mg/Kg-dry	1	12/8/2015
N-Nitrosodimethylamine	ND	0.21		mg/Kg-dry	1	12/8/2015
N-Nitrosodiphenylamine	ND	0.21		mg/Kg-dry	1	12/8/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.21		mg/Kg-dry	1	12/8/2015
Pentachlorophenol	ND	0.081		mg/Kg-dry	1	12/8/2015
Phenanthrene	0.048	0.040		mg/Kg-dry	1	12/8/2015
Phenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Pyrene	0.078	0.040		mg/Kg-dry	1	12/8/2015
Pyridine	ND	0.81		mg/Kg-dry	1	12/8/2015
1,2,4-Trichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4,5-Trichlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4,6-Trichlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/7/2015**		Analyst: **JG**
Aluminum	15000	230		mg/Kg-dry	100	12/7/2015
Antimony	ND	2.3		mg/Kg-dry	10	12/8/2015
Arsenic	12	1.1		mg/Kg-dry	10	12/8/2015
Barium	110	1.1		mg/Kg-dry	10	12/8/2015
Beryllium	0.74	0.57		mg/Kg-dry	10	12/8/2015
Cadmium	ND	0.57		mg/Kg-dry	10	12/8/2015
Calcium	33000	68		mg/Kg-dry	10	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120094 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120094-004

Client Sample ID: 2635-19-B03 (0-2)
Collection Date: 12/3/2015 9:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/7/2015**		Analyst: **JG**
Chromium	21	1.1		mg/Kg-dry	10	12/8/2015
Cobalt	15	1.1		mg/Kg-dry	10	12/8/2015
Copper	25	2.8		mg/Kg-dry	10	12/8/2015
Iron	32000	340		mg/Kg-dry	100	12/7/2015
Lead	36	0.57		mg/Kg-dry	10	12/8/2015
Magnesium	18000	34		mg/Kg-dry	10	12/8/2015
Manganese	730	1.1		mg/Kg-dry	10	12/8/2015
Nickel	30	1.1		mg/Kg-dry	10	12/8/2015
Potassium	1900	34		mg/Kg-dry	10	12/8/2015
Selenium	ND	1.1		mg/Kg-dry	10	12/8/2015
Silver	ND	1.1		mg/Kg-dry	10	12/8/2015
Sodium	74	68		mg/Kg-dry	10	12/8/2015
Thallium	ND	1.1		mg/Kg-dry	10	12/8/2015
Vanadium	29	1.1		mg/Kg-dry	10	12/8/2015
Zinc	57	5.7		mg/Kg-dry	10	12/8/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/7/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.40	0.050		mg/L	5	12/8/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	0.39	0.10	*	mg/L	5	12/8/2015
Cadmium	ND	0.0050		mg/L	5	12/8/2015
Chromium	ND	0.010		mg/L	5	12/8/2015
Cobalt	ND	0.010		mg/L	5	12/8/2015
Iron	ND	0.25		mg/L	5	12/8/2015
Lead	ND	0.0050		mg/L	5	12/8/2015
Manganese	0.066	0.010		mg/L	5	12/9/2015
Nickel	ND	0.020		mg/L	5	12/8/2015
Selenium	ND	0.010		mg/L	5	12/8/2015
Silver	ND	0.010		mg/L	5	12/8/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/8/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/4/2015**		Analyst: **LB**
Mercury	0.029	0.023		mg/Kg-dry	1	12/4/2015

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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120094 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120094-004

Client Sample ID: 2635-19-B03 (0-2)
Collection Date: 12/3/2015 9:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Cyanide, Total	**SW9012A**			Prep Date: **12/4/2015**		Analyst: **YZ**
Cyanide	ND	0.30		mg/Kg-dry	1	12/9/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/4/2015**		Analyst: **GH**
pH	7.4			pH Units	1	12/4/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	17.3	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	82.7	0.20	*	wt%	1	12/4/2015

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e-mail address: STATinfo@STATAnalysis.com ***AIHA, NVLAP and NELAP accredited***

CHAIN OF CUSTODY RECORD

Nº: 860058 **Page :** ____ **of** ____

Company: E&E
Project Number: 1009341.0002.01 Client Tracking No.:
Project Name: IL 38
Project Location: DuPage Co, IL
Sampler(s): S. Simpatico
Report To: D. Tiebout Phone: 312-578-9243
S. Cooper Fax: 312-578-9595
QC Level: 1 2 3 4 e-mail: Dtiebout@eae.com

P.O. No.:
Quote No.:

Turn Around: 10 days
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	Total TAL Metals	pH	% Solids	TCLP/SPLP Metals	Remarks	Lab No.:
2635-19-B01 (0-7)	12/3/15	S	0845		X	AF	4	X	X	X	X	X	X		001
2635-19-B01 (7-14)	12/3/15	S	900		X	AF	4	X	X	X	X	X	X		002
2635-19-B02 (0-4)	12/3/15	S	0930		X	AF	4	X	X	X	X	X	X		003
2635-19-B03 (0-2)	12/3/15	0945	S		X	AF	4	X	X	X	X	X	X		004
2635-19-B04 (0-2)	12/3/15	1000	S		X	AF	4	X	X	X	X	X	X		005

Relinquished by: (Signature)	Date/Time: 12/3/15 1255	
Received by: (Signature)	Date/Time: 12/3/15 12:55	
Relinquished by: (Signature)	Date/Time: 12/3/15 17:14	
Received by: (Signature) Martin Duran	Date/Time: 12/3/15 17:14	
Relinquished by: (Signature)	Date/Time:	
Received by: (Signature)	Date/Time:	

Comments:

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120094

Received on Ice: Yes ☑ No ☐

Temperature: 4.2 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E

Date and Time Received: 12/3/2015 5:14:00 PM

Work Order Number 15120094

Received by: MGK

Checklist completed by: Signature 12/3/15 Date

Reviewed by: Initials 12/4/15 Date

Matrix:

Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 4.2 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120715A-4	97.1	101	98.8	104				
VLCS120715A-4	98.6	100	101	103				
VLCSD120715A-4	96.7	103	96.7	112				
15120094-001A	96.3	102	102	112				
15120094-003A	79.8	98.7	100	108				
15120094-004A	76.9	95.9	96.8	103				
15120094-005A	80.2	96.0	96.2	97.2				
VBLK120815-4	95.7	101	98.3	102				
VLCS120815-4	96.5	101	98.5	102				
VLCSD120815-4	98.5	101	99.0	105				
15120094-002A	66.9	92.1	101	110				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3154513	BFB120715A-4	TUNE	BFB	R116731	1	12/07/2015 20:13
3154514	VSTD100	CCV	VOC_ENCORE+	R116731	1	12/07/2015 20:40
3154515	VBLK120715A-4	MBLK	VOC_ENCORE+	R116731	1	12/07/2015 21:15
3154516	VLCS120715A-4	LCS	VOC_ENCORE+	R116731	1	12/07/2015 21:51
3154517	VLCSD120715A-4	LCSD	VOC_ENCORE+	R116731	1	12/07/2015 22:26
3154518	15120194-001A	RA	VOC_5035	88818	1	12/07/2015 23:11
3154519	15120194-002A	RA	VOC_5035	88818	1	12/07/2015 23:46
3154520	15120094-001A	SAMP	VOC_5035	88870	1	12/08/2015 00:21
3154521	15120094-002A	SAMP	VOC_5035	88870	1	12/08/2015 00:56
3154522	15120094-003A	SAMP	VOC_5035	88870	1	12/08/2015 01:31
3154523	15120094-004A	SAMP	VOC_5035	88870	1	12/08/2015 02:06
3154524	15120094-005A	SAMP	VOC_5035	88870	1	12/08/2015 02:42
3154525	15120056-001A	SAMP	VOC_5035	88776	1	12/08/2015 03:17
3154526	15120056-002A	SAMP	VOC_5035	88776	1	12/08/2015 03:52
3154550	15120197-001A	SAMP	VOC_S+	88870	1	12/08/2015 04:27
3154566	15120102-001A	SAMP	BTEX+_5035	88870	1	12/08/2015 05:02
3154568	15120102-004A	RA	BTEX+_5035	88870	1	12/08/2015 05:37
3154570	15120102-005A	SAMP	BTEX+_5035	88870	1	12/08/2015 06:12
3154571	15120102-010A	SAMP	BTEX+_5035	88870	1	12/08/2015 06:47
3154555	15120109-002A	SAMP	BTEX+_5035	88817	1	12/08/2015 07:22
3154556	15120109-004A	SAMP	BTEX+_5035	88817	1	12/08/2015 07:58

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120715A-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-4_151207B**	**3154515**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116731

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120715A-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-4_151207B**	**3154515**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	0.00134	0.010									J
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120715A-4	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-4_151207B**	**3154516**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04328	0.0050	0.05	0	86.6	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04417	0.0050	0.05	0	88.3	70	130	0	0		
1,1,2-Trichloroethane	0.04607	0.0050	0.05	0	92.1	70	130	0	0		
1,1-Dichloroethane	0.0437	0.0050	0.05	0	87.4	70	130	0	0		
1,1-Dichloroethene	0.04419	0.0050	0.05	0	88.4	70	130	0	0		
1,2-Dichloroethane	0.04038	0.0050	0.05	0	80.8	70	130	0	0		
1,2-Dichloropropane	0.04559	0.0050	0.05	0	91.2	70	130	0	0		
2-Butanone	0.08104	0.075	0.1	0	81	70	130	0	0		
2-Hexanone	0.08056	0.020	0.1	0	80.6	70	130	0	0		
4-Methyl-2-pentanone	0.07983	0.020	0.1	0	79.8	70	130	0	0		
Acetone	0.07148	0.075	0.1	0	71.5	50	150	0	0		J
Benzene	0.04644	0.0050	0.05	0	92.9	70	130	0	0		
Bromodichloromethane	0.04329	0.0050	0.05	0	86.6	70	130	0	0		
Bromoform	0.04536	0.0050	0.05	0	90.7	70	130	0	0		
Bromomethane	0.05197	0.010	0.05	0	104	70	130	0	0		
Carbon disulfide	0.09294	0.050	0.1	0	92.9	70	130	0	0		
Carbon tetrachloride	0.04509	0.0050	0.05	0	90.2	70	130	0	0		
Chlorobenzene	0.04537	0.0050	0.05	0	90.7	70	130	0	0		
Chloroethane	0.05811	0.010	0.05	0	116	70	130	0	0		
Chloroform	0.04319	0.0050	0.05	0	86.4	70	130	0	0		
Chloromethane	0.05228	0.010	0.05	0	105	70	130	0	0		
cis-1,2-Dichloroethene	0.04275	0.0050	0.05	0	85.5	70	130	0	0		
cis-1,3-Dichloropropene	0.04279	0.0020	0.05	0	85.6	70	130	0	0		
Dibromochloromethane	0.04457	0.0050	0.05	0	89.1	70	130	0	0		
Ethylbenzene	0.04626	0.0050	0.05	0	92.5	70	130	0	0		
Methyl tert-butyl ether	0.04018	0.0050	0.05	0	80.4	70	130	0	0		
Methylene chloride	0.04306	0.010	0.05	0.00134	83.4	70	130	0	0		
Styrene	0.04418	0.0050	0.05	0	88.4	70	130	0	0		
Tetrachloroethene	0.0468	0.0050	0.05	0	93.6	70	130	0	0		
Toluene	0.04592	0.0050	0.05	0	91.8	70	130	0	0		
trans-1,2-Dichloroethene	0.04968	0.0050	0.05	0	99.4	70	130	0	0		
trans-1,3-Dichloropropene	0.04446	0.0020	0.05	0	88.9	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120715A-4	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-4_151207B**	**3154516**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Trichloroethene	0.04582	0.0050	0.05	0	91.6	70	130	0	0		
Vinyl chloride	0.05344	0.0050	0.05	0	107	70	130	0	0		
Xylenes, Total	0.1367	0.015	0.15	0	91.1	70	130	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120715A-4	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/7/2015**	**VOA-4_151207B**	**3154517**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04059	0.0050	0.05	0	81.2	70	130	0.04328	6.41	20	
1,1,2,2-Tetrachloroethane	0.04187	0.0050	0.05	0	83.7	70	130	0.04417	5.35	20	
1,1,2-Trichloroethane	0.04373	0.0050	0.05	0	87.5	70	130	0.04607	5.21	20	
1,1-Dichloroethane	0.04065	0.0050	0.05	0	81.3	70	130	0.0437	7.23	20	
1,1-Dichloroethene	0.04118	0.0050	0.05	0	82.4	70	130	0.04419	7.05	20	
1,2-Dichloroethane	0.03797	0.0050	0.05	0	75.9	70	130	0.04038	6.15	20	
1,2-Dichloropropane	0.04267	0.0050	0.05	0	85.3	70	130	0.04559	6.62	20	
2-Butanone	0.08111	0.075	0.1	0	81.1	70	130	0.08104	0.0863	20	
2-Hexanone	0.07666	0.020	0.1	0	76.7	70	130	0.08056	4.96	20	
4-Methyl-2-pentanone	0.078	0.020	0.1	0	78	70	130	0.07983	2.32	20	
Acetone	0.06987	0.075	0.1	0	69.9	50	150	0.07148	0	20	J
Benzene	0.04334	0.0050	0.05	0	86.7	70	130	0.04644	6.91	20	
Bromodichloromethane	0.03971	0.0050	0.05	0	79.4	70	130	0.04329	8.63	20	
Bromoform	0.04263	0.0050	0.05	0	85.3	70	130	0.04536	6.21	20	
Bromomethane	0.0478	0.010	0.05	0	95.6	70	130	0.05197	8.36	20	
Carbon disulfide	0.08644	0.050	0.1	0	86.4	70	130	0.09294	7.25	20	
Carbon tetrachloride	0.04231	0.0050	0.05	0	84.6	70	130	0.04509	6.36	20	
Chlorobenzene	0.04249	0.0050	0.05	0	85	70	130	0.04537	6.56	20	
Chloroethane	0.05494	0.010	0.05	0	110	70	130	0.05811	5.61	20	
Chloroform	0.04011	0.0050	0.05	0	80.2	70	130	0.04319	7.39	20	
Chloromethane	0.04819	0.010	0.05	0	96.4	70	130	0.05228	8.14	20	
cis-1,2-Dichloroethene	0.04014	0.0050	0.05	0	80.3	70	130	0.04275	6.30	20	
cis-1,3-Dichloropropene	0.04021	0.0020	0.05	0	80.4	70	130	0.04279	6.22	20	
Dibromochloromethane	0.0417	0.0050	0.05	0	83.4	70	130	0.04457	6.65	20	
Ethylbenzene	0.04272	0.0050	0.05	0	85.4	70	130	0.04626	7.96	20	
Methyl tert-butyl ether	0.03846	0.0050	0.05	0	76.9	70	130	0.04018	4.37	20	
Methylene chloride	0.04045	0.010	0.05	0.00134	78.2	70	130	0.04306	6.25	20	
Styrene	0.03952	0.0050	0.05	0	79	70	130	0.04418	11.1	20	
Tetrachloroethene	0.04363	0.0050	0.05	0	87.3	70	130	0.0468	7.01	20	
Toluene	0.0436	0.0050	0.05	0	87.2	70	130	0.04592	5.18	20	
trans-1,2-Dichloroethene	0.04535	0.0050	0.05	0	90.7	70	130	0.04968	9.11	20	
trans-1,3-Dichloropropene	0.04103	0.0020	0.05	0	82.1	70	130	0.04446	8.02	20	
Trichloroethene	0.04318	0.0050	0.05	0	86.4	70	130	0.04582	5.93	20	
Vinyl chloride	0.04878	0.0050	0.05	0	97.6	70	130	0.05344	9.12	20	
Xylenes, Total	0.128	0.015	0.15	0	85.4	70	130	0.1367	6.52	20	

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3154725	BFB120815-4	TUNE	BFB	R116739	1	12/08/2015 08:32
3154727	VSTD050	CCV	VOC_ENCORE+	R116739	1	12/08/2015 08:57
3154731	VBLK120815-4	MBLK	VOC_ENCORE+	R116739	1	12/08/2015 09:32
3154733	VLCS120815-4	LCS	VOC_ENCORE+	R116739	1	12/08/2015 10:08
3154734	VLCSD120815-4	LCSD	VOC_ENCORE+	R116739	1	12/08/2015 10:45
3154735	15120094-002A	SAMP	VOC_5035	88843	1	12/08/2015 11:21
3154769	15120056-001A	SAMP	VOC_5035	88883	500	12/08/2015 11:58
3154806	15120056-002A	SAMP	VOC_5035	88883	500	12/08/2015 12:32
3154807	15120056-001A	SAMP	VOC_5035	88883	50	12/08/2015 13:05
3154812	15120056-002A	SAMP	VOC_5035	88883	50	12/08/2015 13:39
3154918	15120102-001A	RA	BTEX+_5035	88883	1	12/08/2015 14:13
3155050	15120102-004A	SAMP	BTEX+_5035	88883	1	12/08/2015 14:47
3155386	15120102-002A	RA	VOC_5035	88870	1	12/08/2015 15:21
3155387	15120102-003A	RA	VOC_5035	88870	1	12/08/2015 15:54
3155388	15120102-006A	SAMP	VOC_5035	88870	1	12/08/2015 16:28
3155389	15120102-007A	SAMP	VOC_5035	88870	1	12/08/2015 17:02
3155390	15120102-008A	SAMP	VOC_5035	88870	1	12/08/2015 17:35
3155391	15120102-011A	SAMP	VOC_5035	88870	1	12/08/2015 18:09

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120815-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-4_151208A**	**3154731**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116739

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120815-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-4_151208A**	**3154731**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120815-4	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-4_151208A**	**3154733**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04425	0.0050	0.05	0	88.5	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04517	0.0050	0.05	0	90.3	70	130	0	0		
1,1,2-Trichloroethane	0.04589	0.0050	0.05	0	91.8	70	130	0	0		
1,1-Dichloroethane	0.04465	0.0050	0.05	0	89.3	70	130	0	0		
1,1-Dichloroethene	0.04446	0.0050	0.05	0	88.9	70	130	0	0		
1,2-Dichloroethane	0.04031	0.0050	0.05	0	80.6	70	130	0	0		
1,2-Dichloropropane	0.04604	0.0050	0.05	0	92.1	70	130	0	0		
2-Butanone	0.08145	0.075	0.1	0	81.4	70	130	0	0		
2-Hexanone	0.07891	0.020	0.1	0	78.9	70	130	0	0		
4-Methyl-2-pentanone	0.08193	0.020	0.1	0	81.9	70	130	0	0		
Acetone	0.07382	0.075	0.1	0	73.8	50	150	0	0		J
Benzene	0.04693	0.0050	0.05	0	93.9	70	130	0	0		
Bromodichloromethane	0.04406	0.0050	0.05	0	88.1	70	130	0	0		
Bromoform	0.04521	0.0050	0.05	0	90.4	70	130	0	0		
Bromomethane	0.05256	0.010	0.05	0	105	70	130	0	0		
Carbon disulfide	0.09345	0.050	0.1	0	93.4	70	130	0	0		
Carbon tetrachloride	0.04538	0.0050	0.05	0	90.8	70	130	0	0		
Chlorobenzene	0.04557	0.0050	0.05	0	91.1	70	130	0	0		
Chloroethane	0.06113	0.010	0.05	0	122	70	130	0	0		
Chloroform	0.04407	0.0050	0.05	0	88.1	70	130	0	0		
Chloromethane	0.05361	0.010	0.05	0	107	70	130	0	0		
cis-1,2-Dichloroethene	0.04311	0.0050	0.05	0	86.2	70	130	0	0		
cis-1,3-Dichloropropene	0.0431	0.0020	0.05	0	86.2	70	130	0	0		
Dibromochloromethane	0.0451	0.0050	0.05	0	90.2	70	130	0	0		
Ethylbenzene	0.04563	0.0050	0.05	0	91.3	70	130	0	0		
Methyl tert-butyl ether	0.0415	0.0050	0.05	0	83	70	130	0	0		
Methylene chloride	0.04406	0.010	0.05	0	88.1	70	130	0	0		
Styrene	0.04435	0.0050	0.05	0	88.7	70	130	0	0		
Tetrachloroethene	0.04656	0.0050	0.05	0	93.1	70	130	0	0		
Toluene	0.0472	0.0050	0.05	0	94.4	70	130	0	0		
trans-1,2-Dichloroethene	0.05049	0.0050	0.05	0	101	70	130	0	0		
trans-1,3-Dichloropropene	0.04429	0.0020	0.05	0	88.6	70	130	0	0		
Trichloroethene	0.0462	0.0050	0.05	0	92.4	70	130	0	0		
Vinyl chloride	0.05463	0.0050	0.05	0	109	70	130	0	0		
Xylenes, Total	0.1362	0.015	0.15	0	90.8	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116739

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120815-4	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-4_151208A**	**3154734**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.0459	0.0050	0.05	0	91.8	70	130	0.04425	3.66	20	
1,1,2,2-Tetrachloroethane	0.04731	0.0050	0.05	0	94.6	70	130	0.04517	4.63	20	
1,1,2-Trichloroethane	0.04989	0.0050	0.05	0	99.8	70	130	0.04589	8.35	20	
1,1-Dichloroethane	0.04652	0.0050	0.05	0	93	70	130	0.04465	4.10	20	
1,1-Dichloroethene	0.047	0.0050	0.05	0	94	70	130	0.04446	5.55	20	
1,2-Dichloroethane	0.04175	0.0050	0.05	0	83.5	70	130	0.04031	3.51	20	
1,2-Dichloropropane	0.04924	0.0050	0.05	0	98.5	70	130	0.04604	6.72	20	
2-Butanone	0.086	0.075	0.1	0	86	70	130	0.08145	5.43	20	
2-Hexanone	0.08656	0.020	0.1	0	86.6	70	130	0.07891	9.25	20	
4-Methyl-2-pentanone	0.0853	0.020	0.1	0	85.3	70	130	0.08193	4.03	20	
Acetone	0.08007	0.075	0.1	0	80.1	50	150	0.07382	8.12	20	
Benzene	0.04889	0.0050	0.05	0	97.8	70	130	0.04693	4.09	20	
Bromodichloromethane	0.04608	0.0050	0.05	0	92.2	70	130	0.04406	4.48	20	
Bromoform	0.04906	0.0050	0.05	0	98.1	70	130	0.04521	8.17	20	
Bromomethane	0.05621	0.010	0.05	0	112	70	130	0.05256	6.71	20	
Carbon disulfide	0.09612	0.050	0.1	0	96.1	70	130	0.09345	2.82	20	
Carbon tetrachloride	0.04726	0.0050	0.05	0	94.5	70	130	0.04538	4.06	20	
Chlorobenzene	0.0486	0.0050	0.05	0	97.2	70	130	0.04557	6.44	20	
Chloroethane	0.06433	0.010	0.05	0	129	70	130	0.06113	5.10	20	
Chloroform	0.04615	0.0050	0.05	0	92.3	70	130	0.04407	4.61	20	
Chloromethane	0.05513	0.010	0.05	0	110	70	130	0.05361	2.80	20	
cis-1,2-Dichloroethene	0.04462	0.0050	0.05	0	89.2	70	130	0.04311	3.44	20	
cis-1,3-Dichloropropene	0.04586	0.0020	0.05	0	91.7	70	130	0.0431	6.21	20	
Dibromochloromethane	0.0488	0.0050	0.05	0	97.6	70	130	0.0451	7.88	20	
Ethylbenzene	0.04863	0.0050	0.05	0	97.3	70	130	0.04563	6.37	20	
Methyl tert-butyl ether	0.04346	0.0050	0.05	0	86.9	70	130	0.0415	4.61	20	
Methylene chloride	0.04639	0.010	0.05	0	92.8	70	130	0.04406	5.15	20	
Styrene	0.04711	0.0050	0.05	0	94.2	70	130	0.04435	6.04	20	
Tetrachloroethene	0.04971	0.0050	0.05	0	99.4	70	130	0.04656	6.54	20	
Toluene	0.04842	0.0050	0.05	0	96.8	70	130	0.0472	2.55	20	
trans-1,2-Dichloroethene	0.05206	0.0050	0.05	0	104	70	130	0.05049	3.06	20	
trans-1,3-Dichloropropene	0.0477	0.0020	0.05	0	95.4	70	130	0.04429	7.41	20	
Trichloroethene	0.04772	0.0050	0.05	0	95.4	70	130	0.0462	3.24	20	
Vinyl chloride	0.0567	0.0050	0.05	0	113	70	130	0.05463	3.72	20	
Xylenes, Total	0.1467	0.015	0.15	0	97.8	70	130	0.1362	7.41	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
MB-88850-SVOC	67.2	67.1	67.4	84.9	66.3	71.0	75.0	82.3
LCS-88850-SVOC	75.7	77.2	82.4	93.1	71.7	77.5	81.8	79.3
15120178-001AMS	52.7	51.9	58.5	90.7	49.1	58.1	66.7	81.6
15120178-001AMSD	53.4	52.4	57.9	88.3	48.8	57.8	65.8	77.9
15120094-001B	64.3	62.6	64.3	82.2	60.5	68.9	70.9	77.1
15120094-002B	66.8	68.5	68.4	82.8	64.9	71.5	73.4	79.5
15120094-003B	56.5	53.8	57.5	83.6	52.5	61.8	66.5	83.9
15120094-004B	65.9	63.7	65.8	92.5	62.7	71.1	72.4	81.7
15120094-005B	55.2	54.9	57.7	76.9	53.5	60.3	60.8	74.1

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88850-SVOC			0.03	0	0	1	33.333	12/7/2015	12/7/2015
LCS-88850-SVOC			0.03	0	0	1	33.333	12/7/2015	12/7/2015
15120093-001B	Soil		0.03046	0	0	1	32.830	12/7/2015	12/7/2015
15120093-002B	Soil		0.03034	0	0	1	32.960	12/7/2015	12/7/2015
15120093-003B	Soil		0.03031	0	0	1	32.992	12/7/2015	12/7/2015
15120094-001B	Soil		0.03047	0	0	1	32.819	12/7/2015	12/7/2015
15120094-002B	Soil		0.0301	0	0	1	33.223	12/7/2015	12/7/2015
15120094-003B	Soil		0.03009	0	0	1	33.234	12/7/2015	12/7/2015
15120094-004B	Soil		0.03002	0	0	1	33.311	12/7/2015	12/7/2015
15120094-005B	Soil		0.03016	0	0	1	33.156	12/7/2015	12/7/2015
15120095-001B	Soil		0.03021	0	0	1	33.102	12/7/2015	12/7/2015
15120097-001B	Soil		0.03007	0	0	1	33.256	12/7/2015	12/7/2015
15120100-001B	Soil		0.03003	0	0	1	33.300	12/7/2015	12/7/2015
15120145-001B	Soil		0.03029	0	0	1	33.014	12/7/2015	12/7/2015
15120150-001B	Soil		0.03035	0	0	1	32.949	12/7/2015	12/7/2015
15120152-001B	Soil		0.03003	0	0	1	33.300	12/7/2015	12/7/2015
15120152-002B	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015
15120156-001B	Soil		0.03036	0	0	1	32.938	12/7/2015	12/7/2015
15120156-002B	Soil		0.03047	0	0	1	32.819	12/7/2015	12/7/2015
15120156-003B	Soil		0.03021	0	0	1	33.102	12/7/2015	12/7/2015
15120156-004B	Soil		0.03024	0	0	1	33.069	12/7/2015	12/7/2015
15120178-001A	Soil		0.03022	0	0	1	33.091	12/7/2015	12/7/2015
15120178-001AMS	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015
15120178-001AMSD	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88850

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88850

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88850-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154656**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.395	0.033	1.667	0	83.7	37	134	0	0		
4-Chloro-3-methylphenol	2.815	0.33	3.333	0	84.4	29	134	0	0		
2-Chlorophenol	2.614	0.17	3.333	0	78.4	29	105	0	0		
1,4-Dichlorobenzene	1.331	0.17	1.667	0	79.8	26	111	0	0		
2,4-Dinitrotoluene	1.501	0.033	1.667	0	90	46	125	0	0		
4-Nitrophenol	3.212	0.33	3.333	0	96.4	12	146	0	0		
N-Nitrosodi-n-propylamine	1.359	0.033	1.667	0	81.5	29	109	0	0		
Pentachlorophenol	2.983	0.067	3.333	0	89.5	10	192	0	0		
Phenol	2.57	0.17	3.333	0	77.1	27	104	0	0		
Pyrene	1.34	0.033	1.667	0	80.4	42	148	0	0		
1,2,4-Trichlorobenzene	1.371	0.17	1.667	0	82.3	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120178-001AMS	**ZZZZZ**	**MS**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154657**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.569	0.033	1.653	0.1271	87.2	24	139	0	0		
4-Chloro-3-methylphenol	2.514	0.33	3.305	0	76	28	121	0	0		
2-Chlorophenol	1.827	0.17	3.305	0	55.3	21	102	0	0		
1,4-Dichlorobenzene	0.8846	0.17	1.653	0	53.5	27	95	0	0		
2,4-Dinitrotoluene	1.435	0.033	1.653	0	86.8	32	127	0	0		
4-Nitrophenol	2.729	0.33	3.305	0	82.6	10	156	0	0		
N-Nitrosodi-n-propylamine	0.9521	0.033	1.653	0	57.6	16	122	0	0		
Pentachlorophenol	2.693	0.066	3.305	0	81.5	10	204	0	0		
Phenol	1.909	0.17	3.305	0	57.8	20	103	0	0		
Pyrene	6.25	0.033	1.653	2.389	234	10	184	0	0		SE
1,2,4-Trichlorobenzene	0.9769	0.17	1.653	0	59.1	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120178-001AMSD	**ZZZZZ**	**MSD**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154658**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.252	0.033	1.653	0.1271	68	24	139	1.569	22.5	57	
4-Chloro-3-methylphenol	2.433	0.33	3.305	0	73.6	28	121	2.514	3.25	88	
2-Chlorophenol	1.806	0.17	3.305	0	54.6	21	102	1.827	1.16	49	
1,4-Dichlorobenzene	0.874	0.17	1.653	0	52.9	27	95	0.8846	1.20	43	
2,4-Dinitrotoluene	1.362	0.033	1.653	0	82.4	32	127	1.435	5.27	37	
4-Nitrophenol	2.699	0.33	3.305	0	81.6	10	156	2.729	1.11	56	
N-Nitrosodi-n-propylamine	0.9583	0.033	1.653	0	58	16	122	0.9521	0.658	47	
Pentachlorophenol	2.721	0.066	3.305	0	82.3	10	204	2.693	1.04	47	
Phenol	1.852	0.17	3.305	0	56	20	103	1.909	3.04	66	
Pyrene	2.701	0.033	1.653	2.389	18.9	10	184	6.25	79.3	51	R
1,2,4-Trichlorobenzene	0.9755	0.17	1.653	0	59	55	106	0.9769	0.135	23	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88855

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS3 12/7/15			1	0	0	50	50.000	12/7/2015	12/7/2015
ILCSS3 12/7/15			1	0	0	50	50.000	12/7/2015	12/7/2015
15120094-001B	Soil		1.027	0	0	50	48.685	12/7/2015	12/7/2015
15120094-002B	Soil		1.09	0	0	50	45.872	12/7/2015	12/7/2015
15120094-003B	Soil		1.036	0	0	50	48.263	12/7/2015	12/7/2015
15120094-004B	Soil		1.065	0	0	50	46.948	12/7/2015	12/7/2015
15120094-005B	Soil		1.056	0	0	50	47.348	12/7/2015	12/7/2015
15120093-001B	Soil		1.083	0	0	50	46.168	12/7/2015	12/7/2015
15120093-002B	Soil		1.069	0	0	50	46.773	12/7/2015	12/7/2015
15120093-003B	Soil		1.046	0	0	50	47.801	12/7/2015	12/7/2015
15120095-001B	Soil		1.048	0	0	50	47.710	12/7/2015	12/7/2015
15120097-001B	Soil		1.08	0	0	50	46.296	12/7/2015	12/7/2015
15120100-001B	Soil		1.085	0	0	50	46.083	12/7/2015	12/7/2015
15120109-001B	Soil		1.088	0	0	50	45.956	12/7/2015	12/7/2015
15120109-002B	Soil		1.094	0	0	50	45.704	12/7/2015	12/7/2015
15120109-003B	Soil		1.048	0	0	50	47.710	12/7/2015	12/7/2015
15120109-004B	Soil		1.012	0	0	50	49.407	12/7/2015	12/7/2015
15120109-004BMS	Soil		1.021	0	0	50	48.972	12/7/2015	12/7/2015
15120109-004BMSD	Soil		1.014	0	0	50	49.310	12/7/2015	12/7/2015
15120152-001B	Soil		1.087	0	0	50	45.998	12/7/2015	12/7/2015
15120152-002B	Soil		1.02	0	0	50	49.020	12/7/2015	12/7/2015
15120197-001A	Soil		1.037	0	0	50	48.216	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS3 12/7/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154398**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	0.2325	1.0									J
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	0.086	0.50									J
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.086	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	ND	0.25									
Sodium	ND	30									
Thallium	ND	0.50									
Vanadium	ND	0.50									

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88855

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS3 12/7/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154398**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS3 12/7/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154399**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	25.02	10	25	0	100	80	120	0	0		
Arsenic	24.2	0.50	25	0	96.8	80	120	0	0		
Barium	27.04	0.50	25	0	108	80	120	0	0		
Beryllium	23.7	0.25	25	0	94.8	80	120	0	0		
Cadmium	25.4	0.25	25	0	102	80	120	0	0		
Calcium	99.5	30	100	0	99.5	80	120	0	0		
Chromium	24.72	0.50	25	0.086	98.5	80	120	0	0		
Cobalt	24.96	0.50	25	0	99.8	80	120	0	0		
Copper	24.24	1.2	25	0	96.9	80	120	0	0		
Iron	102.5	15	100	0	103	80	120	0	0		
Lead	26	0.25	25	0.086	104	80	120	0	0		
Magnesium	96.6	15	100	0	96.6	80	120	0	0		
Manganese	24.84	0.50	25	0	99.4	80	120	0	0		
Nickel	24.24	0.50	25	0	97	80	120	0	0		
Potassium	100.8	15	100	0	101	80	120	0	0		
Selenium	23.28	0.25	25	0	93.1	80	120	0	0		
Silver	11	0.25	10	0	110	80	120	0	0		
Sodium	94.75	30	100	0	94.8	80	120	0	0		
Thallium	25.36	0.50	25	0	101	80	120	0	0		
Vanadium	23.36	0.50	25	0	93.4	80	120	0	0		
Zinc	19.96	2.5	25	0	79.8	80	120	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS3 12/7/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154819**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	20.02	1.0	12.5	0.2325	158	80	120	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	11920	240	29.86	11620	997	75	125	0	0		S
Iron	39900	360	119.4	36690	2680	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154439**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	45.79	1.2	29.86	14.47	105	75	125	0	0		
Barium	81.52	1.2	29.86	79.96	5.24	75	125	0	0		S
Beryllium	29.04	0.60	29.86	0.5435	95.4	75	125	0	0		
Cadmium	30.33	0.60	29.86	0.2494	101	75	125	0	0		
Calcium	49180	72	119.4	48330	708	75	125	0	0		S
Chromium	45.42	1.2	29.86	17.49	93.5	75	125	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154439**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	44.16	1.2	29.86	18.51	85.9	75	125	0	0		
Copper	51.76	3.0	29.86	24.7	90.6	75	125	0	0		
Lead	48.27	0.60	29.86	16.3	107	75	125	0	0		
Magnesium	20340	36	119.4	20350	-10.2	75	125	0	0		S
Manganese	411.3	1.2	29.86	425.6	-47.8	75	125	0	0		S
Nickel	60.56	1.2	29.86	36.46	80.7	75	125	0	0		
Potassium	2404	36	119.4	2237	139	75	125	0	0		S
Selenium	28.95	0.60	29.86	1.443	92.1	75	125	0	0		
Silver	12.08	0.60	11.94	0.08194	100	75	125	0	0		
Sodium	158.3	72	119.4	55.46	86.1	75	125	0	0		
Thallium	29.7	1.2	29.86	0.6658	97.2	75	125	0	0		
Vanadium	46.78	1.2	29.86	19.47	91.4	75	125	0	0		
Zinc	66.83	6.0	29.86	43.89	76.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154824**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	6.348	2.4	14.93	1.889	29.9	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154402**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	11540	240	30.07	11620	-276	75	125	11920	3.25	20	S
Iron	40150	360	120.3	36690	2870	75	125	39900	0.628	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154442**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	44.43	1.2	30.07	14.47	99.6	75	125	45.79	3.01	20	
Barium	92.91	1.2	30.07	79.96	43.1	75	125	81.52	13.1	20	S
Beryllium	29.01	0.60	30.07	0.5435	94.7	75	125	29.04	0.0967	20	
Cadmium	30.93	0.60	30.07	0.2494	102	75	125	30.33	1.96	20	
Calcium	47100	72	120.3	48330	-1020	75	125	49180	4.32	20	S
Chromium	45.98	1.2	30.07	17.49	94.8	75	125	45.42	1.24	20	
Cobalt	44.05	1.2	30.07	18.51	84.9	75	125	44.16	0.263	20	
Copper	53.04	3.0	30.07	24.7	94.3	75	125	51.76	2.44	20	
Lead	47.4	0.60	30.07	16.3	103	75	125	48.27	1.83	20	
Magnesium	19850	36	120.3	20350	-418	75	125	20340	2.44	20	S
Manganese	421.4	1.2	30.07	425.6	-13.8	75	125	411.3	2.43	20	S
Nickel	62.36	1.2	30.07	36.46	86.1	75	125	60.56	2.93	20	
Potassium	2382	36	120.3	2237	120	75	125	2404	0.915	20	
Selenium	28	0.60	30.07	1.443	88.3	75	125	28.95	3.33	20	
Silver	12.15	0.60	12.03	0.08194	100	75	125	12.08	0.540	20	
Sodium	154.7	72	120.3	55.46	82.5	75	125	158.3	2.30	20	
Thallium	29.46	1.2	30.07	0.6658	95.8	75	125	29.7	0.811	20	
Vanadium	47.66	1.2	30.07	19.47	93.8	75	125	46.78	1.87	20	
Zinc	67.53	6.0	30.07	43.89	78.6	75	125	66.83	1.04	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88855

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154825**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	5.909	2.4	15.03	1.889	26.7	75	125	6.348	7.16	20	S

Qualifiers:
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B - Analyte detected in the associated Method Blank
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CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88869

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
ILCSW3 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
IMBTA1 12/4/15			50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMS	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMSD	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-004B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-005B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120095-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120097-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120100-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155493**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	ND	0.015									
Barium	0.02875	0.050									J
Beryllium	ND	0.0050									
Boron	0.5274	0.20									*
Cadmium	ND	0.0050									
Chromium	0.003406	0.010									J
Cobalt	0.000459	0.010									J
Iron	ND	0.25									
Lead	0.001541	0.0050									J
Manganese	0.00106	0.010									J
Nickel	0.002965	0.020									J
Selenium	ND	0.010									
Silver	ND	0.010									
Thallium	0.001742	0.0050									J
Zinc	0.01217	0.050									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**2635-19-B01 (7-14)**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156298**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	0.8081	0.050	0.5	0.2401	114	75	125	0	0		
Boron	0.8592	0.20	0.5	0.3525	101	75	125	0	0		*
Cadmium	0.4302	0.0050	0.5	0	86	75	125	0	0		
Chromium	0.4781	0.010	0.5	0.00094	95.4	75	125	0	0		
Cobalt	0.6679	0.010	0.5	0.2015	93.3	75	125	0	0		
Iron	5.87	0.25	2	3.943	96.4	75	125	0	0		
Lead	0.5383	0.0050	0.5	0.01087	105	75	125	0	0		
Manganese	2.941	0.010	0.5	2.487	90.8	75	125	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
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E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**2635-19-B01 (7-14)**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156298**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nickel	0.7782	0.020	0.5	0.378	80	75	125	0	0		
Selenium	0.4658	0.010	0.5	0.02	89.2	75	125	0	0		
Silver	0.1689	0.010	0.2	0.00065	84.1	75	125	0	0		
Zinc	0.3715	0.050	0.5	0.02575	69.2	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**2635-19-B01 (7-14)**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158971**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3312	0.0060	0.25	0	132	75	125	0	0		S
Beryllium	0.5386	0.0020	0.5	0	108	75	125	0	0		
Thallium	0.5698	0.0020	0.5	0.002182	114	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**2635-19-B01 (7-14)**	**MSD**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156299**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	0.7951	0.050	0.5	0.2401	111	75	125	0.8081	1.62	20	
Boron	0.8348	0.20	0.5	0.3525	96.5	75	125	0.8592	2.88	20	*
Cadmium	0.4272	0.0050	0.5	0	85.4	75	125	0.4302	0.700	20	
Chromium	0.4827	0.010	0.5	0.00094	96.4	75	125	0.4781	0.958	20	
Cobalt	0.6611	0.010	0.5	0.2015	91.9	75	125	0.6679	1.02	20	
Iron	5.62	0.25	2	3.943	83.8	75	125	5.87	4.35	20	
Lead	0.534	0.0050	0.5	0.01087	105	75	125	0.5383	0.802	20	
Manganese	2.838	0.010	0.5	2.487	70.2	75	125	2.941	3.56	20	S
Nickel	0.7738	0.020	0.5	0.378	79.2	75	125	0.7782	0.567	20	
Selenium	0.4684	0.010	0.5	0.02	89.7	75	125	0.4658	0.557	20	
Silver	0.1688	0.010	0.2	0.00065	84.1	75	125	0.1689	0.0592	20	
Zinc	0.3684	0.050	0.5	0.02575	68.5	75	125	0.3715	0.838	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**2635-19-B01 (7-14)**	**MSD**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158972**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3046	0.0060	0.25	0	122	75	125	0.3312	8.38	20	
Beryllium	0.4982	0.0020	0.5	0	99.6	75	125	0.5386	7.79	20	
Thallium	0.5197	0.0020	0.5	0.002182	104	75	125	0.5698	9.18	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156295**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00103	0.0060									J
Barium	ND	0.0040									
Beryllium	ND	0.0020									
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	ND	0.10									
Lead	0.00081	0.0020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156295**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.0017	0.0040									J
Silver	0.00022	0.0040									J
Thallium	0.00043	0.0020									J
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155492**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.2656	0.0060	0.25	0.0009908	106	80	120	0	0		
Barium	0.4833	0.0040	0.5	0	96.7	80	120	0	0		
Beryllium	0.4654	0.0020	0.5	0	93.1	80	120	0	0		
Boron	0.476	0.080	0.5	0	95.2	80	120	0	0		
Cadmium	0.4918	0.0020	0.5	0	98.4	80	120	0	0		
Lead	0.4945	0.0020	0.5	0.001048	98.7	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156296**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.4722	0.0040	0.5	0	94.4	80	120	0	0		
Cobalt	0.4685	0.0040	0.5	0	93.7	80	120	0	0		
Iron	1.888	0.10	2	0	94.4	80	120	0	0		
Manganese	0.4606	0.0040	0.5	0	92.1	80	120	0	0		
Nickel	0.4353	0.0040	0.5	0	87.1	80	120	0	0		
Selenium	0.4573	0.0040	0.5	0.0017	91.1	80	120	0	0		
Silver	0.1883	0.0040	0.2	0.00022	94	80	120	0	0		
Thallium	0.4691	0.0020	0.5	0.00043	93.7	80	120	0	0		
Zinc	0.4127	0.020	0.5	0	82.5	80	120	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88867

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW2 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
ILCSW2 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
IMBSPLP 12/4/15			50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMS	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMSD	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-004B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-005B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120095-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120097-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120100-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBSPLP 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1312/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155469**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	0.001155	0.0020									J
Manganese	0.0002937	0.0040									J
Nickel	ND	0.0080									
Thallium	0.0007372	0.0020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**2635-19-B01 (7-14)**	**MS**	**mg/L**	**SW1312/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155472**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	0.5195	0.0020	0.5	0.001394	104	75	125	0	0		
Manganese	0.6119	0.0040	0.5	0.03454	115	75	125	0	0		
Nickel	0.6025	0.0080	0.5	0.01898	117	75	125	0	0		
Thallium	0.5054	0.0020	0.5	0	101	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**2635-19-B01 (7-14)**	**MSD**	**mg/L**	**SW1312/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155473**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	0.4813	0.0020	0.5	0.001394	96	75	125	0.5195	7.62	20	
Manganese	0.5283	0.0040	0.5	0.03454	98.7	75	125	0.6119	14.7	20	
Nickel	0.516	0.0080	0.5	0.01898	99.4	75	125	0.6025	15.5	20	
Thallium	0.4727	0.0020	0.5	0	94.5	75	125	0.5054	6.67	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW2 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155491**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	0.001048	0.0020									J
Manganese	ND	0.0040									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW2 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155491**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nickel	ND	0.0040									
Thallium	ND	0.0020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW2 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155468**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	0.5223	0.0020	0.5	0.001048	104	80	120	0	0		
Manganese	0.537	0.0040	0.5	0	107	80	120	0	0		
Nickel	0.5451	0.0040	0.5	0	109	80	120	0	0		
Thallium	0.5135	0.0020	0.5	0	103	80	120	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88824

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS2 12/4/15			0.3	0	0	30	100.000	12/4/2015	12/4/2015
HGLCSS2 12/4/15			0.3	0	0	30	100.000	12/4/2015	12/4/2015
15120093-001B	Soil		0.342	0	0	30	87.719	12/4/2015	12/4/2015
15120093-002B	Soil		0.329	0	0	30	91.185	12/4/2015	12/4/2015
15120093-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120093-003BMS	Soil		0.342	0	0	30	87.719	12/4/2015	12/4/2015
15120093-003BMSD	Soil		0.343	0	0	30	87.464	12/4/2015	12/4/2015
15120094-001B	Soil		0.333	0	0	30	90.090	12/4/2015	12/4/2015
15120094-002B	Soil		0.343	0	0	30	87.464	12/4/2015	12/4/2015
15120094-003B	Soil		0.348	0	0	30	86.207	12/4/2015	12/4/2015
15120094-004B	Soil		0.318	0	0	30	94.340	12/4/2015	12/4/2015
15120094-005B	Soil		0.348	0	0	30	86.207	12/4/2015	12/4/2015
15120095-001B	Soil		0.318	0	0	30	94.340	12/4/2015	12/4/2015
15120097-001B	Soil		0.336	0	0	30	89.286	12/4/2015	12/4/2015
15120100-001B	Soil		0.341	0	0	30	87.977	12/4/2015	12/4/2015
15120104-001B	Soil		0.302	0	0	30	99.338	12/4/2015	12/4/2015
15120104-003B	Soil		0.32	0	0	30	93.750	12/4/2015	12/4/2015
15120104-010B	Soil		0.328	0	0	30	91.463	12/4/2015	12/4/2015
15120104-019B	Soil		0.341	0	0	30	87.977	12/4/2015	12/4/2015
15120104-021B	Soil		0.334	0	0	30	89.820	12/4/2015	12/4/2015
15120132-001A	Soil		0.307	0	0	30	97.720	12/4/2015	12/4/2015
15120132-002A	Soil		0.375	0	0	30	80.000	12/4/2015	12/4/2015
15120134-001A	Soil		0.365	0	0	30	82.192	12/4/2015	12/4/2015
15120138-001A	Soil		0.329	0	0	30	91.185	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS2 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153160**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS2 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153161**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2686	0.021	0.2583	0.02465	94.5	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2782	0.021	0.2575	0.02465	98.4	75	125	0.2686	3.48	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/4/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120095-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120097-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120100-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/8/15			30	0	0	30	1.000	12/9/2015	12/9/2015
15120263-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120267-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120069-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-001A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMSO	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120197-001A			30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-002B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMS	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120156-005B	Aqueous		5	0	0	30	6.000	12/9/2015	12/9/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156396**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.00001	0.00020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156400**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0027	0.00020	0.0025	0	108	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0027	3.64	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW3 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156382**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW3 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156383**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0025	0.00020	0.0025	0	100	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88845

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS2 120415			1	0	0	50	50.000	12/4/2015	12/4/2015
TCNLCSS2 120415			1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001BMS	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001BMSD	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-002B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-003B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-004B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-005B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120100-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120104-019B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120104-021B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120097-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS2 120415	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155826**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.09911	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS2 120415	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155827**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.03	0.25	10	0.09911	99.3	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120095-001BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155829**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	11.39	0.32	12.8	0.2562	87	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120095-001BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155830**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.32	12.8	0.2562	79	75	125	11.39	9.40	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116669

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152989	15120077-001A	SAMP	PH_S	R116669	1	12/04/2015
3152992	15120084-001B	SAMP	PH_S	R116669	1	12/04/2015
3152993	15120094-001B	SAMP	PH_S	R116669	1	12/04/2015
3152994	15120094-002B	SAMP	PH_S	R116669	1	12/04/2015
3152995	15120094-003B	SAMP	PH_S	R116669	1	12/04/2015
3152996	15120094-004B	SAMP	PH_S	R116669	1	12/04/2015
3152997	15120094-005B	SAMP	PH_S	R116669	1	12/04/2015
3152998	15120124-001A	SAMP	PH_S	R116669	1	12/04/2015
3153000	15120124-002A	SAMP	PH_S	R116669	1	12/04/2015
3153001	15120124-003A	SAMP	PH_S	R116669	1	12/04/2015
3153002	15120124-004A	SAMP	PH_S	R116669	1	12/04/2015
3153003	15120124-005A	SAMP	PH_S	R116669	1	12/04/2015
3153004	15120124-006A	SAMP	PH_S	R116669	1	12/04/2015
3153005	15120125-001A	SAMP	PH_S	R116669	1	12/04/2015
3153006	15120125-002A	SAMP	PH_S	R116669	1	12/04/2015
3153007	15120125-003A	SAMP	PH_S	R116669	1	12/04/2015
3153008	15120125-004A	SAMP	PH_S	R116669	1	12/04/2015
3153009	15120125-005A	SAMP	PH_S	R116669	1	12/04/2015
3153010	15120125-006A	SAMP	PH_S	R116669	1	12/04/2015
3153013	15120124-001ADUP	DUP	PH_S	R116669	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120124-001ADUP	**ZZZZZ**	**DUP**	**pH Units**	**SW9045C**	**12/4/2015**	**12/4/2015**	**PH_151204A**	**3153013**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	7.81	0	0	0	0	0	0	7.87	0.765	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120094
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116650

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152453	PMMBLK2 12/3/15	MBLK	PMOIST	R116650	1	12/04/2015
3152454	PMLCS-S2 12/3/15	LCS	PMOIST	R116650	1	12/04/2015
3152455	PMLCS-W2 12/3/15	LCS	PMOIST	R116650	1	12/04/2015
3152456	15120079-014A	SAMP	PMOIST	R116650	1	12/04/2015
3152457	15120079-014A DUP	DUP	PMOIST	R116650	1	12/04/2015
3152458	15120079-013A	SAMP	PMOIST	R116650	1	12/04/2015
3152459	15120079-015B	SAMP	PMOIST	R116650	1	12/04/2015
3152460	15120079-016B	SAMP	PMOIST	R116650	1	12/04/2015
3152461	15120079-017B	SAMP	PMOIST	R116650	1	12/04/2015
3152462	15120079-018B	SAMP	PMOIST	R116650	1	12/04/2015
3152463	15120093-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152464	15120093-002B	SAMP	PMOIST	R116650	1	12/04/2015
3152465	15120093-003B	SAMP	PMOIST	R116650	1	12/04/2015
3152466	15120094-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152467	15120094-002B	SAMP	PMOIST	R116650	1	12/04/2015
3152468	15120094-003B	SAMP	PMOIST	R116650	1	12/04/2015
3152469	15120094-004B	SAMP	PMOIST	R116650	1	12/04/2015
3152470	15120094-005B	SAMP	PMOIST	R116650	1	12/04/2015
3152471	15120095-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152472	15120097-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152473	15120105-003A	SAMP	PMOIST	R116650	1	12/04/2015
3152474	15120105-004A	SAMP	PMOIST	R116650	1	12/04/2015
3152475	15120105-004ADUP	DUP	PMOIST	R116650	1	12/04/2015
3152476	15120105-005A	SAMP	PMOIST	R116650	1	12/04/2015
3152477	15120105-006A	SAMP	PMOIST	R116650	1	12/04/2015
3152478	15120105-006ADUP	DUP	PMOIST	R116650	1	12/04/2015
3152524	15120093-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152525	15120093-002B	SAMP	PSOLID	R116650	1	12/04/2015
3152526	15120093-003B	SAMP	PSOLID	R116650	1	12/04/2015
3152527	15120094-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152528	15120094-002B	SAMP	PSOLID	R116650	1	12/04/2015
3152529	15120094-003B	SAMP	PSOLID	R116650	1	12/04/2015
3152530	15120094-004B	SAMP	PSOLID	R116650	1	12/04/2015
3152531	15120094-005B	SAMP	PSOLID	R116650	1	12/04/2015
3152532	15120095-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152533	15120097-001B	SAMP	PSOLID	R116650	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK2 12/3/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152453**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S2 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152454**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.57	0.200	5	0	91.4	80	120	0	0		*

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

ANALYTICAL QC SUMMARY REPORT

Wet Chemistry

BatchID: R116650

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W2 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152455**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.82	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120079-014A DUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152457**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	19.5	0.200	0	0	0	0	0	20.29	3.97	20	*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-004ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152475**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	12.79	0.200	0	0	0	0	0	13.29	3.83	20	*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-006ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152478**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	12.79	0.200	0	0	0	0	0	12.55	1.89	20	*

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 (Illinois Route 38) Office Phone Number, if available:

Physical Site Location (address, incldluding number and street):
1 E. Roosevelt Road (ISGS #2635-20)

City: Oakbrook Terrace State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860045° (Decimal Degrees) Longitude: -87.977398° (-Decimal Degrees)

Identify how the lat/long data were determined:

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

IEPA Site Number(s), if assigned: BOL: 0430805051 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 (Illinois Route 38)

Latitude: 41.860045° Longitude: -87.977398°

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 2635-20-B01 and -B03 were sampled within the construction zone adjacent to ISGS #2635-20 (Citgo). Refer to PSI Report for ISGS #2635-20 (Citgo) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120068.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	ISGS #2635-20 (Citgo)			Comparison Criteria					
BORING	2635-20-B01		2635-20-B03	MACs			TACO		
SAMPLE	2635-20-B01 (0-7)	2635-20-B01 (7-14)	2635-20-B03 (0-2)						
MATRIX	Soil	Soil	Soil						
DEPTH (feet)	0-7	7-14	0-2						
pH	7.7	7.9	8.2	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
VOCs (None Detected)									
SVOCs (mg/kg)									
Benzo(a)anthracene	**0.050**	ND U	**0.12**	0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	**0.061**	ND U	**0.14** †	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	**0.065**	ND U	**0.14**	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	**0.054**	ND U	**0.11**	--	--	--	--	--	--
Benzo(k)fluoranthene	**0.060**	ND U	**0.12**	9	--	--	9	1,700	--
Chrysene	**0.065**	ND U	**0.15**	88	--	--	88	17,000	--
Dibenzo(a,h)anthracene	ND U	ND U	**0.045**	0.09	0.42	0.2	0.42	17	--
Fluoranthene	**0.12**	ND U	**0.32**	3,100	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	**0.045**	ND U	**0.098**	0.9	1.6	0.9	1.6	170	--
Phenanthrene	ND U	ND U	**0.12**	--	--	--	--	--	--
Pyrene	**0.093**	ND U	**0.25**	2,300	--	--	2,300	61,000	--
Inorganics (mg/kg)									
Aluminum	**21,000**	**11,000**	**14,000**	--	--	--	--	--	--
Arsenic	**12** †	**11**	**11**	11.3	13	--	13	61	--
Barium	**95**	**39**	**95**	1,500	--	--	5,500	14,000	--
Beryllium	**1.1**	**0.77**	**0.92**	22	--	--	160	410	--
Calcium	**6,800**	**60,000**	**53,000**	--	--	--	--	--	--
Chromium	**23** †	**19**	**22** †	21	--	--	230	690	--
Cobalt	**10**	**8.3**	**14**	20	--	--	4,700	12,000	--
Copper	**24**	**31**	**28**	2,900	--	--	2,900	8,200	--
Iron	**36,000** †m	**28,000** †m	**29,000** †m	15,000	15,900	--	--	--	--
Lead	**29**	**22**	**47**	107	--	--	400	700	--
Magnesium	**7,100**	**29,000**	**22,000**	325,000	--	--	--	730,000	--
Manganese	**280**	**290**	**550**	630	636	--	1,600	4,100	--
Mercury	**0.081**	**0.021**	**0.027**	0.89	--	--	10	0.1	--
Nickel	**29**	**28**	**33**	100	--	--	1,600	4,100	--
Potassium	**1,900**	**2,300**	**1,900**	--	--	--	--	--	--
Selenium	ND U	**1.4** †	ND U	1.3	--	--	390	1,000	--
Sodium	**1,200**	**540**	**400**	--	--	--	--	--	--
Vanadium	**29**	**21**	**27**	550	--	--	550	1,400	--
Zinc	**57**	**51**	**58**	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)									
Barium	**0.53**	**0.46**	**0.58**	--	--	--	--	--	2
Chromium	ND U	ND U	ND U	--	--	--	--	--	0.1
Cobalt	ND U	**0.021**	ND U	--	--	--	--	--	1
Iron	**1.7**	**3.1**	**3.3**	--	--	--	--	--	5
Manganese	**0.21** L	**2.8** L	**0.011**	--	--	--	--	--	0.15
Nickel	ND U	**0.058**	ND U	--	--	--	--	--	0.1
Selenium	ND U	ND U	ND U	--	--	--	--	--	0.05
SPLP Metals (mg/L)									
Manganese	**0.13**	**0.041**	NA	--	--	--	--	--	0.15

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120068 Revision 0

RE: 1009341.0002.01, IL 38, DuPage County, IL

Dear Dean Tiebout:

STAT Analysis received 4 samples for the referenced project on 12/2/2015 5:45:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

STAT Analysis Corporation

Date: December 15, 2015

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120068 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120068-001A	2635-20-B01 (0-7)		12/2/2015 11:05:00 AM	12/2/2015
15120068-001B	2635-20-B01 (0-7)		12/2/2015 11:05:00 AM	12/2/2015
15120068-002A	2635-20-B01 (7-14)		12/2/2015 11:20:00 AM	12/2/2015
15120068-002B	2635-20-B01 (7-14)		12/2/2015 11:20:00 AM	12/2/2015
15120068-004A	2635-20-B03 (0-2)		12/2/2015 12:00:00 PM	12/2/2015
15120068-004B	2635-20-B03 (0-2)		12/2/2015 12:00:00 PM	12/2/2015

STAT Analysis Corporation

Date: *December 15, 2015*

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120068 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-001

Client Sample ID: 2635-20-B01 (0-7)
Collection Date: 12/2/2015 11:05:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/3/2015**		Analyst: **PS**
Acetone	ND	0.082		mg/Kg-dry	1	12/3/2015
Benzene	ND	0.0055		mg/Kg-dry	1	12/3/2015
Bromodichloromethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
Bromoform	ND	0.0055		mg/Kg-dry	1	12/3/2015
Bromomethane	ND	0.011		mg/Kg-dry	1	12/3/2015
2-Butanone	ND	0.082		mg/Kg-dry	1	12/3/2015
Carbon disulfide	ND	0.055		mg/Kg-dry	1	12/3/2015
Carbon tetrachloride	ND	0.0055		mg/Kg-dry	1	12/3/2015
Chlorobenzene	ND	0.0055		mg/Kg-dry	1	12/3/2015
Chloroethane	ND	0.011		mg/Kg-dry	1	12/3/2015
Chloroform	ND	0.0055		mg/Kg-dry	1	12/3/2015
Chloromethane	ND	0.011		mg/Kg-dry	1	12/3/2015
Dibromochloromethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,1-Dichloroethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,2-Dichloroethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,1-Dichloroethene	ND	0.0055		mg/Kg-dry	1	12/3/2015
cis-1,2-Dichloroethene	ND	0.0055		mg/Kg-dry	1	12/3/2015
trans-1,2-Dichloroethene	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,2-Dichloropropane	ND	0.0055		mg/Kg-dry	1	12/3/2015
cis-1,3-Dichloropropene	ND	0.0022		mg/Kg-dry	1	12/3/2015
trans-1,3-Dichloropropene	ND	0.0022		mg/Kg-dry	1	12/3/2015
Ethylbenzene	ND	0.0055		mg/Kg-dry	1	12/3/2015
2-Hexanone	ND	0.022		mg/Kg-dry	1	12/3/2015
4-Methyl-2-pentanone	ND	0.022		mg/Kg-dry	1	12/3/2015
Methylene chloride	ND	0.011		mg/Kg-dry	1	12/3/2015
Methyl tert-butyl ether	ND	0.0055		mg/Kg-dry	1	12/3/2015
Styrene	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,1,2,2-Tetrachloroethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
Tetrachloroethene	ND	0.0055		mg/Kg-dry	1	12/3/2015
Toluene	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,1,1-Trichloroethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
1,1,2-Trichloroethane	ND	0.0055		mg/Kg-dry	1	12/3/2015
Trichloroethene	ND	0.0055		mg/Kg-dry	1	12/3/2015
Vinyl chloride	ND	0.0055		mg/Kg-dry	1	12/3/2015
Xylenes, Total	ND	0.016		mg/Kg-dry	1	12/3/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Acenaphthene	ND	0.041		mg/Kg-dry	1	12/4/2015
Acenaphthylene	ND	0.041		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-001

Client Sample ID: 2635-20-B01 (0-7)
Collection Date: 12/2/2015 11:05:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Aniline	ND	0.41		mg/Kg-dry	1	12/4/2015
Anthracene	ND	0.041		mg/Kg-dry	1	12/4/2015
Benz(a)anthracene	0.050	0.041		mg/Kg-dry	1	12/4/2015
Benzidine	ND	0.41		mg/Kg-dry	1	12/4/2015
Benzo(a)pyrene	0.061	0.041		mg/Kg-dry	1	12/4/2015
Benzo(b)fluoranthene	0.065	0.041		mg/Kg-dry	1	12/4/2015
Benzo(g,h,i)perylene	0.054	0.041		mg/Kg-dry	1	12/4/2015
Benzo(k)fluoranthene	0.060	0.041		mg/Kg-dry	1	12/4/2015
Benzoic acid	ND	1.0		mg/Kg-dry	1	12/4/2015
Benzyl alcohol	ND	0.21		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethoxy)methane	ND	0.21		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethyl)ether	ND	0.21		mg/Kg-dry	1	12/4/2015
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg-dry	1	12/4/2015
4-Bromophenyl phenyl ether	ND	0.21		mg/Kg-dry	1	12/4/2015
Butyl benzyl phthalate	ND	0.21		mg/Kg-dry	1	12/4/2015
Carbazole	ND	0.21		mg/Kg-dry	1	12/4/2015
4-Chloroaniline	ND	0.21		mg/Kg-dry	1	12/4/2015
4-Chloro-3-methylphenol	ND	0.41		mg/Kg-dry	1	12/4/2015
2-Chloronaphthalene	ND	0.21		mg/Kg-dry	1	12/4/2015
2-Chlorophenol	ND	0.21		mg/Kg-dry	1	12/4/2015
4-Chlorophenyl phenyl ether	ND	0.21		mg/Kg-dry	1	12/4/2015
Chrysene	0.065	0.041		mg/Kg-dry	1	12/4/2015
Dibenz(a,h)anthracene	ND	0.041		mg/Kg-dry	1	12/4/2015
Dibenzofuran	ND	0.21		mg/Kg-dry	1	12/4/2015
1,2-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/4/2015
1,3-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/4/2015
1,4-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/4/2015
3,3´-Dichlorobenzidine	ND	0.21		mg/Kg-dry	1	12/4/2015
2,4-Dichlorophenol	ND	0.21		mg/Kg-dry	1	12/4/2015
Diethyl phthalate	ND	0.21		mg/Kg-dry	1	12/4/2015
2,4-Dimethylphenol	ND	0.21		mg/Kg-dry	1	12/4/2015
Dimethyl phthalate	ND	0.21		mg/Kg-dry	1	12/4/2015
4,6-Dinitro-2-methylphenol	ND	0.41		mg/Kg-dry	1	12/4/2015
2,4-Dinitrophenol	ND	1.0		mg/Kg-dry	1	12/4/2015
2,4-Dinitrotoluene	ND	0.041		mg/Kg-dry	1	12/4/2015
2,6-Dinitrotoluene	ND	0.041		mg/Kg-dry	1	12/4/2015
Di-n-butyl phthalate	ND	0.21		mg/Kg-dry	1	12/4/2015
Di-n-octyl phthalate	ND	0.21		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-001

Client Sample ID: 2635-20-B01 (0-7)
Collection Date: 12/2/2015 11:05:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Fluoranthene	0.12	0.041		mg/Kg-dry	1	12/4/2015
Fluorene	ND	0.041		mg/Kg-dry	1	12/4/2015
Hexachlorobenzene	ND	0.21		mg/Kg-dry	1	12/4/2015
Hexachlorobutadiene	ND	0.21		mg/Kg-dry	1	12/4/2015
Hexachlorocyclopentadiene	ND	0.21		mg/Kg-dry	1	12/4/2015
Hexachloroethane	ND	0.21		mg/Kg-dry	1	12/4/2015
Indeno(1,2,3-cd)pyrene	0.045	0.041		mg/Kg-dry	1	12/4/2015
Isophorone	ND	0.21		mg/Kg-dry	1	12/4/2015
2-Methylnaphthalene	ND	0.21		mg/Kg-dry	1	12/4/2015
2-Methylphenol	ND	0.21		mg/Kg-dry	1	12/4/2015
4-Methylphenol	ND	0.21		mg/Kg-dry	1	12/4/2015
Naphthalene	ND	0.041		mg/Kg-dry	1	12/4/2015
2-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/4/2015
3-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/4/2015
4-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/4/2015
2-Nitrophenol	ND	0.21		mg/Kg-dry	1	12/4/2015
4-Nitrophenol	ND	0.41		mg/Kg-dry	1	12/4/2015
Nitrobenzene	ND	0.041		mg/Kg-dry	1	12/4/2015
N-Nitrosodi-n-propylamine	ND	0.041		mg/Kg-dry	1	12/4/2015
N-Nitrosodimethylamine	ND	0.21		mg/Kg-dry	1	12/4/2015
N-Nitrosodiphenylamine	ND	0.21		mg/Kg-dry	1	12/4/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.21		mg/Kg-dry	1	12/4/2015
Pentachlorophenol	ND	0.083		mg/Kg-dry	1	12/4/2015
Phenanthrene	ND	0.041		mg/Kg-dry	1	12/4/2015
Phenol	ND	0.21		mg/Kg-dry	1	12/4/2015
Pyrene	0.093	0.041		mg/Kg-dry	1	12/4/2015
Pyridine	ND	0.83		mg/Kg-dry	1	12/4/2015
1,2,4-Trichlorobenzene	ND	0.21		mg/Kg-dry	1	12/4/2015
2,4,5-Trichlorophenol	ND	0.21		mg/Kg-dry	1	12/4/2015
2,4,6-Trichlorophenol	ND	0.21		mg/Kg-dry	1	12/4/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Aluminum	21000	230		mg/Kg-dry	100	12/4/2015
Antimony	ND	2.3		mg/Kg-dry	10	12/4/2015
Arsenic	12	1.1		mg/Kg-dry	10	12/4/2015
Barium	95	1.1		mg/Kg-dry	10	12/4/2015
Beryllium	1.1	0.57		mg/Kg-dry	10	12/4/2015
Cadmium	ND	0.57		mg/Kg-dry	10	12/4/2015
Calcium	6800	140		mg/Kg-dry	20	12/7/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-001

Client Sample ID: 2635-20-B01 (0-7)
Collection Date: 12/2/2015 11:05:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Chromium	23	2.3		mg/Kg-dry	20	12/7/2015
Cobalt	10	2.3		mg/Kg-dry	20	12/7/2015
Copper	24	5.7		mg/Kg-dry	20	12/7/2015
Iron	36000	340		mg/Kg-dry	100	12/4/2015
Lead	29	0.57		mg/Kg-dry	10	12/4/2015
Magnesium	7100	69		mg/Kg-dry	20	12/7/2015
Manganese	280	2.3		mg/Kg-dry	20	12/7/2015
Nickel	29	2.3		mg/Kg-dry	20	12/7/2015
Potassium	1900	69		mg/Kg-dry	20	12/7/2015
Selenium	ND	1.1		mg/Kg-dry	10	12/4/2015
Silver	ND	1.1		mg/Kg-dry	10	12/4/2015
Sodium	1200	140		mg/Kg-dry	20	12/7/2015
Thallium	ND	1.1		mg/Kg-dry	10	12/4/2015
Vanadium	29	2.3		mg/Kg-dry	20	12/7/2015
Zinc	57	11		mg/Kg-dry	20	12/7/2015
SPLP Metals by ICP/MS	**SW1312/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Manganese	0.13	0.0040		mg/L	2	12/5/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.53	0.050		mg/L	5	12/5/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	ND	0.10	*	mg/L	5	12/5/2015
Cadmium	ND	0.0050		mg/L	5	12/5/2015
Chromium	ND	0.010		mg/L	5	12/5/2015
Cobalt	ND	0.010		mg/L	5	12/5/2015
Iron	1.7	0.25		mg/L	5	12/5/2015
Lead	ND	0.0050		mg/L	5	12/5/2015
Manganese	0.21	0.010		mg/L	5	12/5/2015
Nickel	ND	0.020		mg/L	5	12/5/2015
Selenium	ND	0.010		mg/L	5	12/5/2015
Silver	ND	0.010		mg/L	5	12/5/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/5/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**

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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-001

Client Sample ID: 2635-20-B01 (0-7)
Collection Date: 12/2/2015 11:05:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**
Mercury	0.081	0.022		mg/Kg-dry	1	12/3/2015
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**
Cyanide	ND	0.31		mg/Kg-dry	1	12/6/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/3/2015**		Analyst: **RW**
pH	7.7			pH Units	1	12/3/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	19.3	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	80.7	0.20	*	wt%	1	12/4/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-002

Client Sample ID: 2635-20-B01 (7-14)
Collection Date: 12/2/2015 11:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/3/2015**		Analyst: **ART**
Acetone	ND	0.064		mg/Kg-dry	1	12/5/2015
Benzene	ND	0.0043		mg/Kg-dry	1	12/5/2015
Bromodichloromethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
Bromoform	ND	0.0043		mg/Kg-dry	1	12/5/2015
Bromomethane	ND	0.0086		mg/Kg-dry	1	12/5/2015
2-Butanone	ND	0.064		mg/Kg-dry	1	12/5/2015
Carbon disulfide	ND	0.043		mg/Kg-dry	1	12/5/2015
Carbon tetrachloride	ND	0.0043		mg/Kg-dry	1	12/5/2015
Chlorobenzene	ND	0.0043		mg/Kg-dry	1	12/5/2015
Chloroethane	ND	0.0086		mg/Kg-dry	1	12/5/2015
Chloroform	ND	0.0043		mg/Kg-dry	1	12/5/2015
Chloromethane	ND	0.0086		mg/Kg-dry	1	12/5/2015
Dibromochloromethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,1-Dichloroethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,2-Dichloroethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,1-Dichloroethene	ND	0.0043		mg/Kg-dry	1	12/5/2015
cis-1,2-Dichloroethene	ND	0.0043		mg/Kg-dry	1	12/5/2015
trans-1,2-Dichloroethene	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,2-Dichloropropane	ND	0.0043		mg/Kg-dry	1	12/5/2015
cis-1,3-Dichloropropene	ND	0.0017		mg/Kg-dry	1	12/5/2015
trans-1,3-Dichloropropene	ND	0.0017		mg/Kg-dry	1	12/5/2015
Ethylbenzene	ND	0.0043		mg/Kg-dry	1	12/5/2015
2-Hexanone	ND	0.017		mg/Kg-dry	1	12/5/2015
4-Methyl-2-pentanone	ND	0.017		mg/Kg-dry	1	12/5/2015
Methylene chloride	ND	0.0086		mg/Kg-dry	1	12/5/2015
Methyl tert-butyl ether	ND	0.0043		mg/Kg-dry	1	12/5/2015
Styrene	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,1,2,2-Tetrachloroethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
Tetrachloroethene	ND	0.0043		mg/Kg-dry	1	12/5/2015
Toluene	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,1,1-Trichloroethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
1,1,2-Trichloroethane	ND	0.0043		mg/Kg-dry	1	12/5/2015
Trichloroethene	ND	0.0043		mg/Kg-dry	1	12/5/2015
Vinyl chloride	ND	0.0043		mg/Kg-dry	1	12/5/2015
Xylenes, Total	ND	0.013		mg/Kg-dry	1	12/5/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Acenaphthene	ND	0.038		mg/Kg-dry	1	12/4/2015
Acenaphthylene	ND	0.038		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-002

Client Sample ID: 2635-20-B01 (7-14)
Collection Date: 12/2/2015 11:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Aniline	ND	0.39		mg/Kg-dry	1	12/4/2015
Anthracene	ND	0.038		mg/Kg-dry	1	12/4/2015
Benz(a)anthracene	ND	0.038		mg/Kg-dry	1	12/4/2015
Benzidine	ND	0.38		mg/Kg-dry	1	12/4/2015
Benzo(a)pyrene	ND	0.038		mg/Kg-dry	1	12/4/2015
Benzo(b)fluoranthene	ND	0.038		mg/Kg-dry	1	12/4/2015
Benzo(g,h,i)perylene	ND	0.038		mg/Kg-dry	1	12/4/2015
Benzo(k)fluoranthene	ND	0.038		mg/Kg-dry	1	12/4/2015
Benzoic acid	ND	0.97		mg/Kg-dry	1	12/4/2015
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-ethylhexyl)phthalate	ND	0.97		mg/Kg-dry	1	12/4/2015
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
Carbazole	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chloro-3-methylphenol	ND	0.38		mg/Kg-dry	1	12/4/2015
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Chrysene	ND	0.038		mg/Kg-dry	1	12/4/2015
Dibenz(a,h)anthracene	ND	0.038		mg/Kg-dry	1	12/4/2015
Dibenzofuran	ND	0.20		mg/Kg-dry	1	12/4/2015
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
3,3´-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
4,6-Dinitro-2-methylphenol	ND	0.38		mg/Kg-dry	1	12/4/2015
2,4-Dinitrophenol	ND	0.97		mg/Kg-dry	1	12/4/2015
2,4-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	12/4/2015
2,6-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	12/4/2015
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-002

Client Sample ID: 2635-20-B01 (7-14)
Collection Date: 12/2/2015 11:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Fluoranthene	ND	0.038		mg/Kg-dry	1	12/4/2015
Fluorene	ND	0.038		mg/Kg-dry	1	12/4/2015
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachloroethane	ND	0.20		mg/Kg-dry	1	12/4/2015
Indeno(1,2,3-cd)pyrene	ND	0.038		mg/Kg-dry	1	12/4/2015
Isophorone	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Methylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Methylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Naphthalene	ND	0.038		mg/Kg-dry	1	12/4/2015
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Nitrophenol	ND	0.38		mg/Kg-dry	1	12/4/2015
Nitrobenzene	ND	0.038		mg/Kg-dry	1	12/4/2015
N-Nitrosodi-n-propylamine	ND	0.038		mg/Kg-dry	1	12/4/2015
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	12/4/2015
N-Nitrosodiphenylamine	ND	0.20		mg/Kg-dry	1	12/4/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	12/4/2015
Pentachlorophenol	ND	0.078		mg/Kg-dry	1	12/4/2015
Phenanthrene	ND	0.038		mg/Kg-dry	1	12/4/2015
Phenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Pyrene	ND	0.038		mg/Kg-dry	1	12/4/2015
Pyridine	ND	0.78		mg/Kg-dry	1	12/4/2015
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Aluminum	11000	210		mg/Kg-dry	100	12/4/2015
Antimony	ND	2.1		mg/Kg-dry	10	12/4/2015
Arsenic	11	1.1		mg/Kg-dry	10	12/4/2015
Barium	39	1.1		mg/Kg-dry	10	12/4/2015
Beryllium	0.77	0.53		mg/Kg-dry	10	12/4/2015
Cadmium	ND	0.53		mg/Kg-dry	10	12/4/2015
Calcium	60000	640		mg/Kg-dry	100	12/4/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-002

Client Sample ID: 2635-20-B01 (7-14)
Collection Date: 12/2/2015 11:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Chromium	19	1.1		mg/Kg-dry	10	12/4/2015
Cobalt	8.3	1.1		mg/Kg-dry	10	12/4/2015
Copper	31	2.7		mg/Kg-dry	10	12/4/2015
Iron	28000	320		mg/Kg-dry	100	12/4/2015
Lead	22	0.53		mg/Kg-dry	10	12/4/2015
Magnesium	29000	32		mg/Kg-dry	10	12/4/2015
Manganese	290	1.1		mg/Kg-dry	10	12/4/2015
Nickel	28	1.1		mg/Kg-dry	10	12/4/2015
Potassium	2300	32		mg/Kg-dry	10	12/4/2015
Selenium	1.4	1.1		mg/Kg-dry	10	12/4/2015
Silver	ND	1.1		mg/Kg-dry	10	12/4/2015
Sodium	540	64		mg/Kg-dry	10	12/4/2015
Thallium	ND	1.1		mg/Kg-dry	10	12/4/2015
Vanadium	21	1.1		mg/Kg-dry	10	12/4/2015
Zinc	51	5.3		mg/Kg-dry	10	12/4/2015
SPLP Metals by ICP/MS	**SW1312/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Manganese	0.041	0.0040		mg/L	2	12/5/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.46	0.050		mg/L	5	12/5/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	ND	0.10	*	mg/L	5	12/5/2015
Cadmium	ND	0.0050		mg/L	5	12/5/2015
Chromium	ND	0.010		mg/L	5	12/5/2015
Cobalt	0.021	0.010		mg/L	5	12/5/2015
Iron	3.1	0.25		mg/L	5	12/5/2015
Lead	ND	0.0050		mg/L	5	12/5/2015
Manganese	2.8	0.010		mg/L	5	12/5/2015
Nickel	0.058	0.020		mg/L	5	12/5/2015
Selenium	ND	0.010		mg/L	5	12/5/2015
Silver	ND	0.010		mg/L	5	12/5/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/5/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**

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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-002

Client Sample ID: 2635-20-B01 (7-14)
Collection Date: 12/2/2015 11:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**
Mercury	0.021	0.019		mg/Kg-dry	1	12/3/2015
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**
Cyanide	ND	0.29		mg/Kg-dry	1	12/6/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/3/2015**		Analyst: **RW**
pH	7.9			pH Units	1	12/3/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	14.1	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	85.9	0.20	*	wt%	1	12/4/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-004

Client Sample ID: 2635-20-B03 (0-2)
Collection Date: 12/2/2015 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/3/2015**		Analyst: **ART**
Acetone	ND	0.077		mg/Kg-dry	1	12/5/2015
Benzene	ND	0.0052		mg/Kg-dry	1	12/5/2015
Bromodichloromethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
Bromoform	ND	0.0052		mg/Kg-dry	1	12/5/2015
Bromomethane	ND	0.010		mg/Kg-dry	1	12/5/2015
2-Butanone	ND	0.077		mg/Kg-dry	1	12/5/2015
Carbon disulfide	ND	0.052		mg/Kg-dry	1	12/5/2015
Carbon tetrachloride	ND	0.0052		mg/Kg-dry	1	12/5/2015
Chlorobenzene	ND	0.0052		mg/Kg-dry	1	12/5/2015
Chloroethane	ND	0.010		mg/Kg-dry	1	12/5/2015
Chloroform	ND	0.0052		mg/Kg-dry	1	12/5/2015
Chloromethane	ND	0.010		mg/Kg-dry	1	12/5/2015
Dibromochloromethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,1-Dichloroethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,2-Dichloroethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,1-Dichloroethene	ND	0.0052		mg/Kg-dry	1	12/5/2015
cis-1,2-Dichloroethene	ND	0.0052		mg/Kg-dry	1	12/5/2015
trans-1,2-Dichloroethene	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,2-Dichloropropane	ND	0.0052		mg/Kg-dry	1	12/5/2015
cis-1,3-Dichloropropene	ND	0.0021		mg/Kg-dry	1	12/5/2015
trans-1,3-Dichloropropene	ND	0.0021		mg/Kg-dry	1	12/5/2015
Ethylbenzene	ND	0.0052		mg/Kg-dry	1	12/5/2015
2-Hexanone	ND	0.021		mg/Kg-dry	1	12/5/2015
4-Methyl-2-pentanone	ND	0.021		mg/Kg-dry	1	12/5/2015
Methylene chloride	ND	0.010		mg/Kg-dry	1	12/5/2015
Methyl tert-butyl ether	ND	0.0052		mg/Kg-dry	1	12/5/2015
Styrene	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,1,2,2-Tetrachloroethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
Tetrachloroethene	ND	0.0052		mg/Kg-dry	1	12/5/2015
Toluene	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,1,1-Trichloroethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
1,1,2-Trichloroethane	ND	0.0052		mg/Kg-dry	1	12/5/2015
Trichloroethene	ND	0.0052		mg/Kg-dry	1	12/5/2015
Vinyl chloride	ND	0.0052		mg/Kg-dry	1	12/5/2015
Xylenes, Total	ND	0.015		mg/Kg-dry	1	12/5/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Acenaphthene	ND	0.039		mg/Kg-dry	1	12/4/2015
Acenaphthylene	ND	0.039		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-004

Client Sample ID: 2635-20-B03 (0-2)
Collection Date: 12/2/2015 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Aniline	ND	0.39		mg/Kg-dry	1	12/4/2015
Anthracene	ND	0.039		mg/Kg-dry	1	12/4/2015
Benz(a)anthracene	0.12	0.039		mg/Kg-dry	1	12/4/2015
Benzidine	ND	0.39		mg/Kg-dry	1	12/4/2015
Benzo(a)pyrene	0.14	0.039		mg/Kg-dry	1	12/4/2015
Benzo(b)fluoranthene	0.14	0.039		mg/Kg-dry	1	12/4/2015
Benzo(g,h,i)perylene	0.11	0.039		mg/Kg-dry	1	12/4/2015
Benzo(k)fluoranthene	0.12	0.039		mg/Kg-dry	1	12/4/2015
Benzoic acid	ND	0.98		mg/Kg-dry	1	12/4/2015
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-ethylhexyl)phthalate	ND	0.98		mg/Kg-dry	1	12/4/2015
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
Carbazole	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chloro-3-methylphenol	ND	0.39		mg/Kg-dry	1	12/4/2015
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Chrysene	0.15	0.039		mg/Kg-dry	1	12/4/2015
Dibenz(a,h)anthracene	0.045	0.039		mg/Kg-dry	1	12/4/2015
Dibenzofuran	ND	0.20		mg/Kg-dry	1	12/4/2015
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
3,3´-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
4,6-Dinitro-2-methylphenol	ND	0.39		mg/Kg-dry	1	12/4/2015
2,4-Dinitrophenol	ND	0.98		mg/Kg-dry	1	12/4/2015
2,4-Dinitrotoluene	ND	0.039		mg/Kg-dry	1	12/4/2015
2,6-Dinitrotoluene	ND	0.039		mg/Kg-dry	1	12/4/2015
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015

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ANALYTICAL RESULTS

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Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-004

Client Sample ID: 2635-20-B03 (0-2)
Collection Date: 12/2/2015 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Fluoranthene	0.32	0.039		mg/Kg-dry	1	12/4/2015
Fluorene	ND	0.039		mg/Kg-dry	1	12/4/2015
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachloroethane	ND	0.20		mg/Kg-dry	1	12/4/2015
Indeno(1,2,3-cd)pyrene	0.098	0.039		mg/Kg-dry	1	12/4/2015
Isophorone	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Methylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Methylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Naphthalene	ND	0.039		mg/Kg-dry	1	12/4/2015
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Nitrophenol	ND	0.39		mg/Kg-dry	1	12/4/2015
Nitrobenzene	ND	0.039		mg/Kg-dry	1	12/4/2015
N-Nitrosodi-n-propylamine	ND	0.039		mg/Kg-dry	1	12/4/2015
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	12/4/2015
N-Nitrosodiphenylamine	ND	0.20		mg/Kg-dry	1	12/4/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	12/4/2015
Pentachlorophenol	ND	0.079		mg/Kg-dry	1	12/4/2015
Phenanthrene	0.12	0.039		mg/Kg-dry	1	12/4/2015
Phenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Pyrene	0.25	0.039		mg/Kg-dry	1	12/4/2015
Pyridine	ND	0.79		mg/Kg-dry	1	12/4/2015
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Aluminum	14000	220		mg/Kg-dry	100	12/4/2015
Antimony	ND	2.2		mg/Kg-dry	10	12/4/2015
Arsenic	11	1.1		mg/Kg-dry	10	12/4/2015
Barium	95	1.1		mg/Kg-dry	10	12/4/2015
Beryllium	0.92	0.56		mg/Kg-dry	10	12/4/2015
Cadmium	ND	0.56		mg/Kg-dry	10	12/4/2015
Calcium	53000	67		mg/Kg-dry	10	12/4/2015

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-004

Client Sample ID: 2635-20-B03 (0-2)
Collection Date: 12/2/2015 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Chromium	22	1.1		mg/Kg-dry	10	12/4/2015
Cobalt	14	1.1		mg/Kg-dry	10	12/4/2015
Copper	28	2.8		mg/Kg-dry	10	12/4/2015
Iron	29000	340		mg/Kg-dry	100	12/4/2015
Lead	47	0.56		mg/Kg-dry	10	12/4/2015
Magnesium	22000	34		mg/Kg-dry	10	12/4/2015
Manganese	550	1.1		mg/Kg-dry	10	12/4/2015
Nickel	33	1.1		mg/Kg-dry	10	12/4/2015
Potassium	1900	34		mg/Kg-dry	10	12/4/2015
Selenium	ND	1.1		mg/Kg-dry	10	12/4/2015
Silver	ND	1.1		mg/Kg-dry	10	12/4/2015
Sodium	400	67		mg/Kg-dry	10	12/4/2015
Thallium	ND	1.1		mg/Kg-dry	10	12/4/2015
Vanadium	27	1.1		mg/Kg-dry	10	12/4/2015
Zinc	58	5.6		mg/Kg-dry	10	12/4/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.58	0.050		mg/L	5	12/5/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	ND	0.10	*	mg/L	5	12/5/2015
Cadmium	ND	0.0050		mg/L	5	12/5/2015
Chromium	ND	0.010		mg/L	5	12/5/2015
Cobalt	ND	0.010		mg/L	5	12/5/2015
Iron	3.3	0.25		mg/L	5	12/5/2015
Lead	ND	0.0050		mg/L	5	12/5/2015
Manganese	0.011	0.010		mg/L	5	12/5/2015
Nickel	ND	0.020		mg/L	5	12/5/2015
Selenium	ND	0.010		mg/L	5	12/5/2015
Silver	ND	0.010		mg/L	5	12/5/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/5/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**
Mercury	0.027	0.021		mg/Kg-dry	1	12/3/2015
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**

Qualifiers:
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B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120068 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120068-004

Client Sample ID: 2635-20-B03 (0-2)
Collection Date: 12/2/2015 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**
Cyanide	ND	0.30		mg/Kg-dry	1	12/6/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/3/2015**		Analyst: **RW**
pH	8.2			pH Units	1	12/3/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	15.4	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	84.6	0.20	*	wt%	1	12/4/2015

Qualifiers:

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J - Analyte detected below quanititation limits
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HT - Sample received past holding time
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e-mail address: STATinfo@STATAnalysis.com *AIHA, NVLAP and NELAP accredited*

CHAIN OF CUSTODY RECORD

Nº: 866227 **Page :** ____ **of** ____

Company: Ecology & Environment
Project Number: 1009341 0002 01 Client Tracking No.:
Project Name: IL 39
Project Location: DuPage County, IL
Sampler(s): S. Cooper

Report To: D. Trebert Phone: 312 578 2443
S. Cooper Fax: 312 578 4315
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail: dtrebert@ene.com

P.O. No.:
Quote No.:

Turn Around: 10 Days
Results Needed: ____ / ____ / ____ am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	TCL TAL MWD	TCLP VOC TAL metals	pH	% Solids	Remarks	Lab No.:
2635-20-B01 (0-7)	12-2-15	1105	S		X	AF	2	X	X	X	X	X	X		001
2635-20-B01 (7-14)	12-2-15	1120	S		X	AF	2	X	X	X	X	X	X		002
2635-20-B02 (0-2)	12-2-15	1145	S		X	AF	2	X	X	X	X	X	X		003
2635-20-B03 (0-2)	12-2-15	1200	S		X	AF	2	X	X	X	X	X	X		004

Relinquished by: (Signature)	Date/Time: 12-2-15/1525	
Received by: (Signature)	Date/Time: 12/2/15 15:25	
Relinquished by: (Signature)	Date/Time: 12/2/15 17:45	
Received by: (Signature) Martin Duran	Date/Time: 12/2/15 17:45	
Relinquished by: (Signature)	Date/Time:	
Received by: (Signature)	Date/Time:	

Comments:

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120068

Received on Ice: Yes ☑ No ☐

Temperature: 3.6 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E | Date and Time Received: 12/2/2015 5:45:00 PM

Work Order Number 15120068 | Received by: MGK

Checklist completed by: Martin-Green (Signature) 12/2/15 (Date) | Reviewed by: MMB (Initials) 12/3/15 (Date)

Matrix: | Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 3.6 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: | Date contacted: | Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120315C-3	104	100	110	105				
VLCS120315C-3	110	103	116	103				
VLCSD120315C-3	106	104	115	107				
15120068-001A	90.3	99.6	128	120				
15120068-003A	93.8	101	125	124				
VBLK120515-4	95.3	102	97.0	102				
VLCS120515-4	98.1	102	97.8	104				
VLCSD120515-4	94.9	101	96.9	107				
15120068-002A	74.9	95.5	95.8	107				
15120068-004A	87.8	101	102	113				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152309	BFB120315C-3	TUNE	BFB	R116647	1	12/03/2015 13:36
3152310	VSTD050R	CCV	VOC_ENCORE+	R116647	1	12/03/2015 14:44
3152311	VBLK120315C-3	MBLK	VOC_ENCORE+	R116647	1	12/03/2015 15:19
3152312	VLCS120315C-3	LCS	VOC_ENCORE+	R116647	1	12/03/2015 15:54
3152313	VLCSD120315C-3	LCSD	VOC_ENCORE+	R116647	1	12/03/2015 16:29
3152314	15120051-002A	SAMP	VOC_5035	88795	1	12/03/2015 17:14
3152315	15120051-005A	SAMP	VOC_5035	88795	1	12/03/2015 17:49
3152316	15120051-007A	SAMP	VOC_5035	88795	1	12/03/2015 18:24
3152317	15120051-009A	SAMP	VOC_5035	88795	1	12/03/2015 18:59
3152318	15120051-011A	SAMP	VOC_5035	88795	1	12/03/2015 19:34
3152319	15120051-013A	SAMP	VOC_5035	88795	1	12/03/2015 20:09
3152320	15120068-001A	SAMP	VOC_5035	88773	1	12/03/2015 20:43
3152321	15120068-002A	SAMP	VOC_5035	88773	1	12/03/2015 21:18
3152322	15120068-003A	SAMP	VOC_5035	88773	1	12/03/2015 21:53
3152323	15120068-004A	SAMP	VOC_5035	88773	1	12/03/2015 22:28
3152324	15120069-001A	SAMP	VOC_5035	88773	1	12/03/2015 23:02
3152326	15120069-002A	SAMP	VOC_5035	88773	1	12/03/2015 23:37
3152325	15120069-003A	SAMP	VOC_5035	88773	1	12/04/2015 00:12

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120315C-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152311**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	0.00023	0.0050									J

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116647

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120315C-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152311**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	0.0002	0.0050									J
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	0.00087	0.015									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120315C-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152312**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04428	0.0050	0.05	0	88.6	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04326	0.0050	0.05	0	86.5	70	130	0	0		
1,1,2-Trichloroethane	0.04435	0.0050	0.05	0	88.7	70	130	0	0		
1,1-Dichloroethane	0.04362	0.0050	0.05	0	87.2	70	130	0	0		
1,1-Dichloroethene	0.04401	0.0050	0.05	0	88	70	130	0	0		
1,2-Dichloroethane	0.04418	0.0050	0.05	0	88.4	70	130	0	0		
1,2-Dichloropropane	0.04321	0.0050	0.05	0	86.4	70	130	0	0		
2-Butanone	0.09013	0.075	0.1	0	90.1	70	130	0	0		
2-Hexanone	0.08772	0.020	0.1	0	87.7	70	130	0	0		
4-Methyl-2-pentanone	0.09075	0.020	0.1	0	90.8	70	130	0	0		
Acetone	0.09108	0.075	0.1	0	91.1	50	150	0	0		
Benzene	0.04207	0.0050	0.05	0	84.1	70	130	0	0		
Bromodichloromethane	0.0455	0.0050	0.05	0	91	70	130	0	0		
Bromoform	0.048	0.0050	0.05	0	96	70	130	0	0		
Bromomethane	0.04663	0.010	0.05	0	93.3	70	130	0	0		
Carbon disulfide	0.09568	0.050	0.1	0	95.7	70	130	0	0		
Carbon tetrachloride	0.04272	0.0050	0.05	0	85.4	70	130	0	0		
Chlorobenzene	0.04411	0.0050	0.05	0	88.2	70	130	0	0		
Chloroethane	0.04824	0.010	0.05	0	96.5	70	130	0	0		
Chloroform	0.04706	0.0050	0.05	0	94.1	70	130	0	0		
Chloromethane	0.04618	0.010	0.05	0	92.4	70	130	0	0		
cis-1,2-Dichloroethene	0.04452	0.0050	0.05	0	89	70	130	0	0		
cis-1,3-Dichloropropene	0.04371	0.0020	0.05	0	87.4	70	130	0	0		
Dibromochloromethane	0.04609	0.0050	0.05	0	92.2	70	130	0	0		
Ethylbenzene	0.04365	0.0050	0.05	0.00023	86.8	70	130	0	0		
Methyl tert-butyl ether	0.05201	0.0050	0.05	0	104	70	130	0	0		
Methylene chloride	0.05113	0.010	0.05	0	102	70	130	0	0		
Styrene	0.04618	0.0050	0.05	0	92.4	70	130	0	0		
Tetrachloroethene	0.04325	0.0050	0.05	0	86.5	70	130	0	0		
Toluene	0.04359	0.0050	0.05	0.0002	86.8	70	130	0	0		
trans-1,2-Dichloroethene	0.04952	0.0050	0.05	0	99	70	130	0	0		
trans-1,3-Dichloropropene	0.04553	0.0020	0.05	0	91.1	70	130	0	0		
Trichloroethene	0.04345	0.0050	0.05	0	86.9	70	130	0	0		
Vinyl chloride	0.04723	0.0050	0.05	0	94.5	70	130	0	0		
Xylenes, Total	0.1335	0.015	0.15	0.00087	88.4	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116647

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120315C-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152313**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04534	0.0050	0.05	0	90.7	70	130	0.04428	2.37	20	
1,1,2,2-Tetrachloroethane	0.04257	0.0050	0.05	0	85.1	70	130	0.04326	1.61	20	
1,1,2-Trichloroethane	0.04182	0.0050	0.05	0	83.6	70	130	0.04435	5.87	20	
1,1-Dichloroethane	0.04368	0.0050	0.05	0	87.4	70	130	0.04362	0.137	20	
1,1-Dichloroethene	0.04357	0.0050	0.05	0	87.1	70	130	0.04401	1.00	20	
1,2-Dichloroethane	0.04543	0.0050	0.05	0	90.9	70	130	0.04418	2.79	20	
1,2-Dichloropropane	0.0437	0.0050	0.05	0	87.4	70	130	0.04321	1.13	20	
2-Butanone	0.09061	0.075	0.1	0	90.6	70	130	0.09013	0.531	20	
2-Hexanone	0.0842	0.020	0.1	0	84.2	70	130	0.08772	4.09	20	
4-Methyl-2-pentanone	0.09272	0.020	0.1	0	92.7	70	130	0.09075	2.15	20	
Acetone	0.09109	0.075	0.1	0	91.1	50	150	0.09108	0.0110	20	
Benzene	0.04274	0.0050	0.05	0	85.5	70	130	0.04207	1.58	20	
Bromodichloromethane	0.04591	0.0050	0.05	0	91.8	70	130	0.0455	0.897	20	
Bromoform	0.04693	0.0050	0.05	0	93.9	70	130	0.048	2.25	20	
Bromomethane	0.04554	0.010	0.05	0	91.1	70	130	0.04663	2.37	20	
Carbon disulfide	0.09593	0.050	0.1	0	95.9	70	130	0.09568	0.261	20	
Carbon tetrachloride	0.04401	0.0050	0.05	0	88	70	130	0.04272	2.97	20	
Chlorobenzene	0.04213	0.0050	0.05	0	84.3	70	130	0.04411	4.59	20	
Chloroethane	0.04914	0.010	0.05	0	98.3	70	130	0.04824	1.85	20	
Chloroform	0.04712	0.0050	0.05	0	94.2	70	130	0.04706	0.127	20	
Chloromethane	0.04661	0.010	0.05	0	93.2	70	130	0.04618	0.927	20	
cis-1,2-Dichloroethene	0.04449	0.0050	0.05	0	89	70	130	0.04452	0.0674	20	
cis-1,3-Dichloropropene	0.04425	0.0020	0.05	0	88.5	70	130	0.04371	1.23	20	
Dibromochloromethane	0.04529	0.0050	0.05	0	90.6	70	130	0.04609	1.75	20	
Ethylbenzene	0.04208	0.0050	0.05	0.00023	83.7	70	130	0.04365	3.66	20	
Methyl tert-butyl ether	0.05213	0.0050	0.05	0	104	70	130	0.05201	0.230	20	
Methylene chloride	0.047	0.010	0.05	0	94	70	130	0.05113	8.42	20	
Styrene	0.04453	0.0050	0.05	0	89.1	70	130	0.04618	3.64	20	
Tetrachloroethene	0.04183	0.0050	0.05	0	83.7	70	130	0.04325	3.34	20	
Toluene	0.04377	0.0050	0.05	0.0002	87.1	70	130	0.04359	0.412	20	
trans-1,2-Dichloroethene	0.04948	0.0050	0.05	0	99	70	130	0.04952	0.0808	20	
trans-1,3-Dichloropropene	0.04387	0.0020	0.05	0	87.7	70	130	0.04553	3.71	20	
Trichloroethene	0.04391	0.0050	0.05	0	87.8	70	130	0.04345	1.05	20	
Vinyl chloride	0.04747	0.0050	0.05	0	94.9	70	130	0.04723	0.507	20	
Xylenes, Total	0.13	0.015	0.15	0.00087	86.1	70	130	0.1335	2.61	20	

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116691

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3153515	BFB120515-4	TUNE	BFB	R116691	1	12/05/2015 15:50
3153516	VSTD100	CCV	VOC_ENCORE+	R116691	1	12/05/2015 16:51
3153517	VBLK120515-4	MBLK	VOC_ENCORE+	R116691	1	12/05/2015 17:27
3153518	VLCS120515-4	LCS	VOC_ENCORE+	R116691	1	12/05/2015 18:02
3153519	VLCSD120515-4	LCSD	VOC_ENCORE+	R116691	1	12/05/2015 18:37
3153520	15120029-009A	RA	VOC_5035	88773	1	12/05/2015 19:22
3153521	15120029-010A	SAMP	VOC_5035	88773	1	12/05/2015 19:57
3153522	15120029-011A	SAMP	VOC_5035	88773	1	12/05/2015 20:31
3153523	15120029-013A	SAMP	VOC_5035	88773	1	12/05/2015 21:06
3153531	15120068-002A	SAMP	VOC_5035	88818	1	12/05/2015 21:40
3153538	15120068-004A	SAMP	VOC_5035	88818	1	12/05/2015 22:15
3153539	15120069-001A	SAMP	VOC_5035	88843	1	12/05/2015 22:49
3153540	15120069-002A	SAMP	VOC_5035	88843	1	12/05/2015 23:23
3153541	15120037-004A	SAMP	VOC_5035	88818	1	12/05/2015 23:58
3153542	15120037-001A	SAMP	VOC_5035	88818	1	12/06/2015 01:06

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120515-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153517**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	0.00032	0.050									J
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	0.00201	0.010									J
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									

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E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116691

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120515-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153517**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120515-4	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153518**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04317	0.0050	0.05	0	86.3	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.0432	0.0050	0.05	0	86.4	70	130	0	0		
1,1,2-Trichloroethane	0.04499	0.0050	0.05	0	90	70	130	0	0		
1,1-Dichloroethane	0.0424	0.0050	0.05	0	84.8	70	130	0	0		
1,1-Dichloroethene	0.04306	0.0050	0.05	0	86.1	70	130	0	0		
1,2-Dichloroethane	0.03821	0.0050	0.05	0	76.4	70	130	0	0		
1,2-Dichloropropane	0.04412	0.0050	0.05	0	88.2	70	130	0	0		
2-Butanone	0.0807	0.075	0.1	0	80.7	70	130	0	0		
2-Hexanone	0.08014	0.020	0.1	0	80.1	70	130	0	0		
4-Methyl-2-pentanone	0.07971	0.020	0.1	0	79.7	70	130	0	0		
Acetone	0.0693	0.075	0.1	0	69.3	50	150	0	0		J
Benzene	0.04474	0.0050	0.05	0	89.5	70	130	0	0		
Bromodichloromethane	0.04176	0.0050	0.05	0	83.5	70	130	0	0		
Bromoform	0.04315	0.0050	0.05	0	86.3	70	130	0	0		
Bromomethane	0.04958	0.010	0.05	0	99.2	70	130	0	0		
Carbon disulfide	0.08978	0.050	0.1	0.00032	89.5	70	130	0	0		
Carbon tetrachloride	0.04427	0.0050	0.05	0	88.5	70	130	0	0		
Chlorobenzene	0.04357	0.0050	0.05	0	87.1	70	130	0	0		
Chloroethane	0.05723	0.010	0.05	0	114	70	130	0	0		
Chloroform	0.04128	0.0050	0.05	0	82.6	70	130	0	0		
Chloromethane	0.04997	0.010	0.05	0	99.9	70	130	0	0		
cis-1,2-Dichloroethene	0.04106	0.0050	0.05	0	82.1	70	130	0	0		
cis-1,3-Dichloropropene	0.04167	0.0020	0.05	0	83.3	70	130	0	0		
Dibromochloromethane	0.04367	0.0050	0.05	0	87.3	70	130	0	0		
Ethylbenzene	0.04429	0.0050	0.05	0	88.6	70	130	0	0		
Methyl tert-butyl ether	0.04013	0.0050	0.05	0	80.3	70	130	0	0		
Methylene chloride	0.04193	0.010	0.05	0.00201	79.8	70	130	0	0		
Styrene	0.04179	0.0050	0.05	0	83.6	70	130	0	0		
Tetrachloroethene	0.0454	0.0050	0.05	0	90.8	70	130	0	0		
Toluene	0.04473	0.0050	0.05	0	89.5	70	130	0	0		
trans-1,2-Dichloroethene	0.04694	0.0050	0.05	0	93.9	70	130	0	0		
trans-1,3-Dichloropropene	0.04305	0.0020	0.05	0	86.1	70	130	0	0		
Trichloroethene	0.04421	0.0050	0.05	0	88.4	70	130	0	0		
Vinyl chloride	0.05126	0.0050	0.05	0	103	70	130	0	0		
Xylenes, Total	0.1313	0.015	0.15	0	87.6	70	130	0	0		

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CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116691

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120515-4	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153519**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.0434	0.0050	0.05	0	86.8	70	130	0.04317	0.531	20	
1,1,2,2-Tetrachloroethane	0.04402	0.0050	0.05	0	88	70	130	0.0432	1.88	20	
1,1,2-Trichloroethane	0.04512	0.0050	0.05	0	90.2	70	130	0.04499	0.289	20	
1,1-Dichloroethane	0.04231	0.0050	0.05	0	84.6	70	130	0.0424	0.212	20	
1,1-Dichloroethene	0.04308	0.0050	0.05	0	86.2	70	130	0.04306	0.0464	20	
1,2-Dichloroethane	0.03878	0.0050	0.05	0	77.6	70	130	0.03821	1.48	20	
1,2-Dichloropropane	0.04546	0.0050	0.05	0	90.9	70	130	0.04412	2.99	20	
2-Butanone	0.07956	0.075	0.1	0	79.6	70	130	0.0807	1.42	20	
2-Hexanone	0.0804	0.020	0.1	0	80.4	70	130	0.08014	0.324	20	
4-Methyl-2-pentanone	0.07877	0.020	0.1	0	78.8	70	130	0.07971	1.19	20	
Acetone	0.06744	0.075	0.1	0	67.4	50	150	0.0693	0	20	J
Benzene	0.04531	0.0050	0.05	0	90.6	70	130	0.04474	1.27	20	
Bromodichloromethane	0.04135	0.0050	0.05	0	82.7	70	130	0.04176	0.987	20	
Bromoform	0.04414	0.0050	0.05	0	88.3	70	130	0.04315	2.27	20	
Bromomethane	0.05091	0.010	0.05	0	102	70	130	0.04958	2.65	20	
Carbon disulfide	0.09096	0.050	0.1	0.00032	90.6	70	130	0.08978	1.31	20	
Carbon tetrachloride	0.04348	0.0050	0.05	0	87	70	130	0.04427	1.80	20	
Chlorobenzene	0.04363	0.0050	0.05	0	87.3	70	130	0.04357	0.138	20	
Chloroethane	0.05822	0.010	0.05	0	116	70	130	0.05723	1.72	20	
Chloroform	0.04147	0.0050	0.05	0	82.9	70	130	0.04128	0.459	20	
Chloromethane	0.0523	0.010	0.05	0	105	70	130	0.04997	4.56	20	
cis-1,2-Dichloroethene	0.04162	0.0050	0.05	0	83.2	70	130	0.04106	1.35	20	
cis-1,3-Dichloropropene	0.04186	0.0020	0.05	0	83.7	70	130	0.04167	0.455	20	
Dibromochloromethane	0.0439	0.0050	0.05	0	87.8	70	130	0.04367	0.525	20	
Ethylbenzene	0.04442	0.0050	0.05	0	88.8	70	130	0.04429	0.293	20	
Methyl tert-butyl ether	0.04092	0.0050	0.05	0	81.8	70	130	0.04013	1.95	20	
Methylene chloride	0.04334	0.010	0.05	0.00201	82.7	70	130	0.04193	3.31	20	
Styrene	0.04187	0.0050	0.05	0	83.7	70	130	0.04179	0.191	20	
Tetrachloroethene	0.04521	0.0050	0.05	0	90.4	70	130	0.0454	0.419	20	
Toluene	0.04458	0.0050	0.05	0	89.2	70	130	0.04473	0.336	20	
trans-1,2-Dichloroethene	0.04759	0.0050	0.05	0	95.2	70	130	0.04694	1.38	20	
trans-1,3-Dichloropropene	0.0437	0.0020	0.05	0	87.4	70	130	0.04305	1.50	20	
Trichloroethene	0.04459	0.0050	0.05	0	89.2	70	130	0.04421	0.856	20	
Vinyl chloride	0.05287	0.0050	0.05	0	106	70	130	0.05126	3.09	20	
Xylenes, Total	0.1321	0.015	0.15	0	88.1	70	130	0.1313	0.585	20	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
15120068-001B	55.2	56.7	50.4	86.4	49.0	52.3	71.3	76.4
15120068-002B	49.6	53.9	46.2	77.9	44.9	46.6	63.2	70.6
15120068-003B	56.4	61.6	51.3	89.0	51.7	53.1	71.1	78.2
15120068-004B	48.8	51.8	44.9	80.9	43.4	46.7	63.1	74.4
MB-88796-SVOC	71.5	74.2	70.4	112	68.7	70.5	88.1	85.4
LCS-88796-SVOC	67.3	71.3	67.6	107	63.5	63.6	80.7	74.3
15120105-004AMS	76.2	79.2	75.0	133 *	67.2	71.0	96.4	89.2
15120105-004AMSD	62.7	63.7	64.4	125 *	57.2	62.6	83.0	91.6
15120105-006AMS	70.5	74.4	73.4	130 *	62.0	67.8	92.6	90.1
15120105-006AMSD	71.3	74.1	70.7	127 *	63.8	67.6	90.5	88.8
15120068-004BMS	66.2	69.6	68.1	122	60.9	65.1	88.3	85.9
15120068-004BMSD	59.9	61.3	59.4	106	54.9	59.1	75.5	72.6

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88796-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
LCS-88796-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
15120068-001B	Soil		0.03005	0	0	1	33.278	12/3/2015	12/3/2015
15120068-002B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15120068-003B	Soil		0.03012	0	0	1	33.201	12/3/2015	12/3/2015
15120068-004B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120084-001B	Soil		0.03044	0	0	1	32.852	12/3/2015	12/3/2015
15120068-004BMS	Soil		0.03019	0	0	1	33.124	12/3/2015	12/3/2015
15120068-004BMSD	Soil		0.03019	0	0	1	33.124	12/3/2015	12/3/2015
15120051-001A	Soil		0.03031	0	0	1	32.992	12/4/2015	12/4/2015
15120051-004A	Soil		0.03003	0	0	1	33.300	12/4/2015	12/4/2015
15120051-005B	Soil		0.03041	0	0	1	32.884	12/4/2015	12/4/2015
15120051-007B	Soil		0.03005	0	0	1	33.278	12/4/2015	12/4/2015
15120051-009B	Soil		0.03012	0	0	1	33.201	12/4/2015	12/4/2015
15120051-011B	Soil		0.03003	0	0	1	33.300	12/4/2015	12/4/2015
15120051-013B	Soil		0.03037	0	0	1	32.927	12/4/2015	12/4/2015
15120051-014A	Soil		0.0302	0	0	1	33.113	12/4/2015	12/4/2015
15120051-015B	Soil		0.03007	0	0	1	33.256	12/4/2015	12/4/2015
15120051-016B	Soil		0.03016	0	0	1	33.156	12/4/2015	12/4/2015
15120051-017B	Soil		0.03034	0	0	1	32.960	12/4/2015	12/4/2015
15120105-003A	Soil		0.03008	0	0	1	33.245	12/4/2015	12/4/2015
15120105-004A	Soil		0.03023	0	0	1	33.080	12/4/2015	12/4/2015
15120105-004AMS	Soil		0.03023	0	0	1	33.080	12/4/2015	12/4/2015
15120105-004AMSD	Soil		0.03024	0	0	1	33.069	12/4/2015	12/4/2015
15120105-005A	Soil		0.03007	0	0	1	33.256	12/4/2015	12/4/2015
15120105-006A	Soil		0.03018	0	0	1	33.135	12/4/2015	12/4/2015
15120105-006AMS	Soil		0.03016	0	0	1	33.156	12/4/2015	12/4/2015
15120105-006AMSD	Soil		0.03018	0	0	1	33.135	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88796-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152600**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88796

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88796-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152600**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88796-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152600**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88796-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152620**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.238	0.033	1.667	0	74.3	24	139	0	0		
4-Chloro-3-methylphenol	2.515	0.33	3.333	0	75.5	28	121	0	0		
2-Chlorophenol	2.334	0.17	3.333	0	70	21	102	0	0		
1,4-Dichlorobenzene	1.242	0.17	1.667	0	74.5	27	95	0	0		
2,4-Dinitrotoluene	1.409	0.033	1.667	0	84.5	32	127	0	0		
4-Nitrophenol	2.623	0.33	3.333	0	78.7	10	156	0	0		
N-Nitrosodi-n-propylamine	1.057	0.033	1.667	0	63.4	16	122	0	0		
Pentachlorophenol	3.341	0.067	3.333	0	100	10	204	0	0		
Phenol	2.107	0.17	3.333	0	63.2	20	103	0	0		
Pyrene	1.258	0.033	1.667	0	75.5	10	184	0	0		
1,2,4-Trichlorobenzene	1.347	0.17	1.667	0	80.8	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-004AMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/4/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152621**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.704	0.038	1.908	0	89.3	24	139	0	0		
4-Chloro-3-methylphenol	3.425	0.38	3.815	0	89.8	28	121	0	0		
2-Chlorophenol	2.994	0.19	3.815	0	78.5	21	102	0	0		
1,4-Dichlorobenzene	1.543	0.19	1.908	0	80.8	27	95	0	0		
2,4-Dinitrotoluene	1.966	0.038	1.908	0	103	32	127	0	0		
4-Nitrophenol	3.705	0.38	3.815	0	97.1	10	156	0	0		
N-Nitrosodi-n-propylamine	1.349	0.038	1.908	0	70.7	16	122	0	0		
Pentachlorophenol	4.656	0.077	3.815	0	122	10	204	0	0		E
Phenol	2.677	0.19	3.815	0	70.2	20	103	0	0		
Pyrene	1.797	0.038	1.908	0.02556	92.8	10	184	0	0		
1,2,4-Trichlorobenzene	1.739	0.19	1.908	0	91.2	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-006AMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/4/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152749**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.639	0.038	1.897	0	86.4	24	139	0	0		
4-Chloro-3-methylphenol	3.382	0.38	3.793	0	89.1	28	121	0	0		
2-Chlorophenol	2.773	0.19	3.793	0	73.1	21	102	0	0		
1,4-Dichlorobenzene	1.404	0.19	1.897	0	74	27	95	0	0		
2,4-Dinitrotoluene	1.907	0.038	1.897	0	101	32	127	0	0		
4-Nitrophenol	3.612	0.38	3.793	0	95.2	10	156	0	0		
N-Nitrosodi-n-propylamine	1.314	0.038	1.897	0	69.3	16	122	0	0		
Pentachlorophenol	4.599	0.076	3.793	0	121	10	204	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-006AMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/4/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152749**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	2.529	0.19	3.793	0	66.7	20	103	0	0		
Pyrene	1.707	0.038	1.897	0.9319	40.9	10	184	0	0		
1,2,4-Trichlorobenzene	1.63	0.19	1.897	0	85.9	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-004BMS	**2635-20-B03 (0-2)**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152868**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.614	0.039	1.958	0	82.4	24	139	0	0		
4-Chloro-3-methylphenol	3.326	0.39	3.915	0	84.9	28	121	0	0		
2-Chlorophenol	2.67	0.20	3.915	0	68.2	21	102	0	0		
1,4-Dichlorobenzene	1.43	0.20	1.958	0	73	27	95	0	0		
2,4-Dinitrotoluene	1.858	0.039	1.958	0	94.9	32	127	0	0		
4-Nitrophenol	3.467	0.39	3.915	0	88.6	10	156	0	0		
N-Nitrosodi-n-propylamine	1.271	0.039	1.958	0	64.9	16	122	0	0		
Pentachlorophenol	4.467	0.079	3.915	0	114	10	204	0	0		
Phenol	2.525	0.20	3.915	0	64.5	20	103	0	0		
Pyrene	1.826	0.039	1.958	0	93.3	10	184	0	0		
1,2,4-Trichlorobenzene	1.608	0.20	1.958	0	82.1	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-004AMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW8270C**	**12/4/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152622**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.496	0.038	1.907	0	78.4	24	139	1.704	13.1	57	
4-Chloro-3-methylphenol	3.152	0.38	3.814	0	82.7	28	121	3.425	8.30	88	
2-Chlorophenol	2.434	0.19	3.814	0	63.8	21	102	2.994	20.7	49	
1,4-Dichlorobenzene	1.247	0.19	1.907	0	65.4	27	95	1.543	21.2	43	
2,4-Dinitrotoluene	1.838	0.038	1.907	0	96.3	32	127	1.966	6.77	37	
4-Nitrophenol	3.537	0.38	3.814	0	92.7	10	156	3.705	4.65	56	
N-Nitrosodi-n-propylamine	1.232	0.038	1.907	0	64.6	16	122	1.349	9.05	47	
Pentachlorophenol	4.546	0.077	3.814	0	119	10	204	4.656	2.39	47	
Phenol	2.355	0.19	3.814	0	61.8	20	103	2.677	12.8	66	
Pyrene	1.752	0.038	1.907	0.02556	90.5	10	184	1.797	2.53	51	
1,2,4-Trichlorobenzene	1.461	0.19	1.907	0	76.6	55	106	1.739	17.4	23	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-006AMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW8270C**	**12/4/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152858**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.602	0.038	1.896	0	84.5	24	139	1.639	2.29	57	
4-Chloro-3-methylphenol	3.321	0.38	3.791	0	87.6	28	121	3.382	1.80	88	
2-Chlorophenol	2.769	0.19	3.791	0	73.1	21	102	2.773	0.121	49	
1,4-Dichlorobenzene	1.423	0.19	1.896	0	75.1	27	95	1.404	1.33	43	
2,4-Dinitrotoluene	1.861	0.038	1.896	0	98.1	32	127	1.907	2.48	37	
4-Nitrophenol	3.529	0.38	3.791	0	93.1	10	156	3.612	2.33	56	
N-Nitrosodi-n-propylamine	1.303	0.038	1.896	0	68.7	16	122	1.314	0.849	47	
Pentachlorophenol	4.479	0.076	3.791	0	118	10	204	4.599	2.65	47	
Phenol	2.515	0.19	3.791	0	66.3	20	103	2.529	0.563	66	
Pyrene	1.681	0.038	1.896	0.9319	39.5	10	184	1.707	1.57	51	
1,2,4-Trichlorobenzene	1.645	0.19	1.896	0	86.7	55	106	1.63	0.883	23	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Semivolatiles

BatchID: 88796

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-004BMSD	**2635-20-B03 (0-2)**	**MSD**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-7_151204A**	**3152890**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.408	0.039	1.958	0	71.9	24	139	1.614	13.6	57	
4-Chloro-3-methylphenol	2.888	0.39	3.915	0	73.8	28	121	3.326	14.1	88	
2-Chlorophenol	2.388	0.20	3.915	0	61	21	102	2.67	11.1	49	
1,4-Dichlorobenzene	1.23	0.20	1.958	0	62.8	27	95	1.43	15.0	43	
2,4-Dinitrotoluene	1.538	0.039	1.958	0	78.5	32	127	1.858	18.9	37	
4-Nitrophenol	2.883	0.39	3.915	0	73.6	10	156	3.467	18.4	56	
N-Nitrosodi-n-propylamine	1.072	0.039	1.958	0	54.7	16	122	1.271	17.0	47	
Pentachlorophenol	3.765	0.079	3.915	0	96.2	10	204	4.467	17.1	47	
Phenol	2.292	0.20	3.915	0	58.5	20	103	2.525	9.70	66	
Pyrene	2.03	0.039	1.958	0	104	10	184	1.826	10.6	51	
1,2,4-Trichlorobenzene	1.422	0.20	1.958	0	72.6	55	106	1.608	12.3	23	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88809

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
ILCSS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
15110611-006B	Soil		1.049	0	0	50	47.664	12/4/2015	12/4/2015
15110611-006BMS	Soil		1.043	0	0	50	47.939	12/4/2015	12/4/2015
15110611-006BMSD	Soil		1.047	0	0	50	47.755	12/4/2015	12/4/2015
15110611-010B	Soil		1.035	0	0	50	48.309	12/4/2015	12/4/2015
15120068-001B	Soil		1.08	0	0	50	46.296	12/4/2015	12/4/2015
15120068-002B	Soil		1.089	0	0	50	45.914	12/4/2015	12/4/2015
15120068-003B	Soil		1.051	0	0	50	47.574	12/4/2015	12/4/2015
15120068-004B	Soil		1.052	0	0	50	47.529	12/4/2015	12/4/2015
15120069-001B	Soil		1.05	0	0	50	47.619	12/4/2015	12/4/2015
15120069-002B	Soil		1.055	0	0	50	47.393	12/4/2015	12/4/2015
15120069-003B	Soil		1.075	0	0	50	46.512	12/4/2015	12/4/2015
15120065-001B	Soil		1.063	0	0	50	47.037	12/4/2015	12/4/2015
15120065-002B	Soil		1.012	0	0	50	49.407	12/4/2015	12/4/2015
15120067-001B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120067-002B	Soil		1.013	0	0	50	49.358	12/4/2015	12/4/2015
15120067-003B	Soil		1.072	0	0	50	46.642	12/4/2015	12/4/2015
15120067-004B	Soil		1.065	0	0	50	46.948	12/4/2015	12/4/2015
15120067-005B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120144-001B	Soil		1.082	0	0	50	46.211	12/4/2015	12/4/2015
15120144-002B	Soil		1.069	0	0	50	46.773	12/4/2015	12/4/2015
15120144-003B	Soil		1.01	0	0	50	49.505	12/4/2015	12/4/2015
15120145-001B	Soil		1.092	0	0	50	45.788	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	1.498	1.0									
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.0515	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	0.0215	0.25									J
Sodium	ND	30									

Qualifiers:
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B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.032	0.50									J
Vanadium	ND	0.50									
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152979**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	23.34	10	25	0	93.4	80	120	0	0		
Arsenic	24.22	0.50	25	0	96.9	80	120	0	0		
Beryllium	24.28	0.25	25	0	97.1	80	120	0	0		
Cadmium	25.26	0.25	25	0	101	80	120	0	0		
Chromium	24.26	0.50	25	0	97.1	80	120	0	0		
Cobalt	24.18	0.50	25	0	96.7	80	120	0	0		
Iron	97.7	15	100	0	97.7	80	120	0	0		
Lead	25.04	0.25	25	0.0515	99.9	80	120	0	0		
Magnesium	92	15	100	0	92	80	120	0	0		
Manganese	24.37	0.50	25	0	97.5	80	120	0	0		
Nickel	23.45	0.50	25	0	93.8	80	120	0	0		
Potassium	95.5	15	100	0	95.5	80	120	0	0		
Selenium	22.84	0.25	25	0	91.3	80	120	0	0		
Silver	10.57	0.25	10	0.0215	105	80	120	0	0		
Vanadium	23.9	0.50	25	0	95.6	80	120	0	0		
Zinc	20.64	2.5	25	0	82.6	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154062**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	19.57	1.0	12.5	1.498	145	80	120	0	0		BS
Barium	27.12	0.50	25	0	108	80	120	0	0		
Calcium	97.1	30	100	0	97.1	80	120	0	0		
Copper	24.55	1.2	25	0	98.2	80	120	0	0		
Sodium	94.4	30	100	0	94.4	80	120	0	0		
Thallium	24.84	0.50	25	0.032	99.2	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	799.6	23	28.84	716.4	288	75	125	0	0		S
Arsenic	31.15	1.2	28.84	0.6849	106	75	125	0	0		
Beryllium	29.58	0.58	28.84	0.08776	102	75	125	0	0		
Cadmium	30.38	0.58	28.84	0	105	75	125	0	0		
Chromium	31.49	1.2	28.84	1.393	104	75	125	0	0		
Cobalt	31.21	1.2	28.84	1.387	103	75	125	0	0		
Iron	2021	35	115.4	1834	163	75	125	0	0		S
Lead	33.34	0.58	28.84	1.892	109	75	125	0	0		
Magnesium	3462	35	115.4	3189	237	75	125	0	0		S
Manganese	54.9	1.2	28.84	23.45	109	75	125	0	0		
Nickel	31.18	1.2	28.84	2.191	101	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Potassium	262.5	35	115.4	134	111	75	125	0	0		
Selenium	29.78	0.58	28.84	0	103	75	125	0	0		
Silver	12.58	0.58	11.54	0.05392	109	75	125	0	0		
Vanadium	32.45	1.2	28.84	2.302	105	75	125	0	0		
Zinc	32.12	5.8	28.84	4.955	94.2	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153571**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	33.19	1.2	28.84	2.77	105	75	125	0	0		
Calcium	6080	69	115.4	5799	244	75	125	0	0		S
Copper	28.86	2.9	28.84	0	100	75	125	0	0		
Iron	1924	35	115.4	1870	46.3	75	125	0	0		S
Sodium	135	69	115.4	0	117	75	125	0	0		
Thallium	27.61	1.2	28.84	0	95.7	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152983**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	769.5	23	28.73	716.4	185	75	125	799.6	3.83	20	S
Arsenic	29.82	1.1	28.73	0.6849	101	75	125	31.15	4.37	20	
Beryllium	28.49	0.57	28.73	0.08776	98.8	75	125	29.58	3.77	20	
Cadmium	29.43	0.57	28.73	0	102	75	125	30.38	3.16	20	
Chromium	29.88	1.1	28.73	1.393	99.2	75	125	31.49	5.24	20	
Cobalt	29	1.1	28.73	1.387	96.1	75	125	31.21	7.33	20	
Iron	1887	34	114.9	1834	46.5	75	125	2021	6.86	20	S
Lead	30.96	0.57	28.73	1.892	101	75	125	33.34	7.40	20	
Magnesium	3212	34	114.9	3189	19.8	75	125	3462	7.51	20	S
Manganese	52.05	1.1	28.73	23.45	99.5	75	125	54.9	5.33	20	
Nickel	29.6	1.1	28.73	2.191	95.4	75	125	31.18	5.19	20	
Potassium	251.7	34	114.9	134	102	75	125	262.5	4.19	20	
Selenium	27.83	0.57	28.73	0	96.8	75	125	29.78	6.78	20	
Silver	11.92	0.57	11.49	0.05392	103	75	125	12.58	5.32	20	
Vanadium	30.31	1.1	28.73	2.302	97.5	75	125	32.45	6.82	20	
Zinc	30.28	5.7	28.73	4.955	88.1	75	125	32.12	5.90	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	31.52	1.1	28.73	2.77	100	75	125	35.44	11.7	20	
Calcium	5804	69	114.9	5799	4.64	75	125	6253	7.45	20	S
Copper	27.72	2.9	28.73	0	96.5	75	125	30.06	8.08	20	
Iron	1869	34	114.9	1870	-1.39	75	125	2021	7.84	20	S
Sodium	128.3	69	114.9	0	112	75	125	150.2	15.7	20	
Thallium	26.77	1.1	28.73	0	93.2	75	125	29.96	11.3	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTA1 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTB 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153663**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00252	0.015									J
Barium	0.00723	0.050									J
Beryllium	0.00133	0.0050									J
Boron	ND	0.20									*
Cadmium	ND	0.0050									
Chromium	0.00263	0.010									J
Cobalt	ND	0.010									
Iron	ND	0.25									
Lead	0.00622	0.0050									
Manganese	ND	0.010									
Nickel	0.00163	0.020									J
Selenium	0.02254	0.010									
Silver	0.00136	0.010									J
Thallium	0.00532	0.0050									
Zinc	ND	0.050									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3818	0.015	0.25	0	153	75	125	0	0		S
Barium	0.7309	0.050	0.5	0.2486	96.5	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Beryllium	0.4595	0.0050	0.5	0	91.9	75	125	0	0		
Boron	0.5382	0.20	0.5	0.07279	93.1	75	125	0	0		*
Cadmium	0.4657	0.0050	0.5	0.00168	92.8	75	125	0	0		
Chromium	0.4769	0.010	0.5	0	95.4	75	125	0	0		
Iron	8.144	0.25	2	6.457	84.4	75	125	0	0		
Lead	0.5213	0.0050	0.5	0.0039	103	75	125	0	0		
Manganese	2.325	0.010	0.5	1.963	72.4	75	125	0	0		S
Nickel	0.4481	0.020	0.5	0.02373	84.9	75	125	0	0		
Selenium	0.5055	0.010	0.5	0	101	75	125	0	0		
Silver	0.1895	0.010	0.2	0	94.8	75	125	0	0		
Zinc	0.379	0.050	0.5	0	75.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-002AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153684**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3956	0.015	0.25	0	158	75	125	0	0		S
Barium	0.696	0.050	0.5	0.2229	94.6	75	125	0	0		
Beryllium	0.4479	0.0050	0.5	0.00138	89.3	75	125	0	0		
Boron	0.5084	0.20	0.5	0.07339	87	75	125	0	0		*
Cadmium	0.4504	0.0050	0.5	0	90.1	75	125	0	0		
Chromium	0.4579	0.010	0.5	0.00555	90.5	75	125	0	0		
Cobalt	0.4391	0.010	0.5	0	87.8	75	125	0	0		
Iron	3.131	0.25	2	1.601	76.5	75	125	0	0		
Lead	0.4866	0.0050	0.5	0.00443	96.4	75	125	0	0		
Manganese	0.5423	0.010	0.5	0.1063	87.2	75	125	0	0		
Nickel	0.4152	0.020	0.5	0.00456	82.1	75	125	0	0		
Selenium	0.4716	0.010	0.5	0	94.3	75	125	0	0		
Silver	0.1838	0.010	0.2	0	91.9	75	125	0	0		
Thallium	0.4604	0.0050	0.5	0	92.1	75	125	0	0		
Zinc	0.3813	0.050	0.5	0	76.3	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154070**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4886	0.010	0.5	0.01341	95	75	125	0	0		
Thallium	0.5081	0.0050	0.5	0	102	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3877	0.015	0.25	0	155	75	125	0.3818	1.53	20	S
Barium	0.7407	0.050	0.5	0.2486	98.4	75	125	0.7309	1.33	20	
Beryllium	0.458	0.0050	0.5	0	91.6	75	125	0.4595	0.327	20	
Boron	0.5514	0.20	0.5	0.07279	95.7	75	125	0.5382	2.42	20	*
Cadmium	0.4794	0.0050	0.5	0.00168	95.5	75	125	0.4657	2.90	20	
Chromium	0.49	0.010	0.5	0	98	75	125	0.4769	2.71	20	
Iron	8.216	0.25	2	6.457	88	75	125	8.144	0.880	20	
Lead	0.5285	0.0050	0.5	0.0039	105	75	125	0.5213	1.37	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	2.369	0.010	0.5	1.963	81.2	75	125	2.325	1.87	20	
Nickel	0.4567	0.020	0.5	0.02373	86.6	75	125	0.4481	1.90	20	
Selenium	0.5075	0.010	0.5	0	102	75	125	0.5055	0.395	20	
Silver	0.1933	0.010	0.2	0	96.7	75	125	0.1895	1.99	20	
Zinc	0.3905	0.050	0.5	0	78.1	75	125	0.379	2.99	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154071**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4877	0.010	0.5	0.01341	94.9	75	125	0.4886	0.184	20	
Thallium	0.5063	0.0050	0.5	0	101	75	125	0.5081	0.355	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153661**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00191	0.0060									J
Barium	ND	0.0040									
Beryllium	0.00045	0.0020									J
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	0.02087	0.10									J
Lead	0.00037	0.0020									J
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.00291	0.0040									J
Silver	0.00054	0.0040									J
Thallium	ND	0.0020									
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153662**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3925	0.0060	0.25	0.00191	156	80	120	0	0		S
Barium	0.4838	0.0040	0.5	0	96.8	80	120	0	0		
Beryllium	0.493	0.0020	0.5	0.00045	98.5	80	120	0	0		
Boron	0.4585	0.080	0.5	0	91.7	80	120	0	0		
Cadmium	0.5143	0.0020	0.5	0	103	80	120	0	0		
Chromium	0.4788	0.0040	0.5	0	95.8	80	120	0	0		
Cobalt	0.4756	0.0040	0.5	0	95.1	80	120	0	0		
Iron	1.939	0.10	2	0.02087	95.9	80	120	0	0		
Lead	0.5226	0.0020	0.5	0.00037	104	80	120	0	0		
Manganese	0.4849	0.0040	0.5	0	97	80	120	0	0		
Nickel	0.46	0.0040	0.5	0	92	80	120	0	0		
Selenium	0.5162	0.0040	0.5	0.00291	103	80	120	0	0		
Silver	0.213	0.0040	0.2	0.00054	106	80	120	0	0		
Zinc	0.4505	0.020	0.5	0	90.1	80	120	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/10/2015**	**ICPMS_151210B**	**3157568**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.4924	0.010	0.5	0	98.5	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88823

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW2 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW2 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBSPLP 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002BMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002BMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBSPLP 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153640**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-002BMS	**2635-20-B01 (7-14)**	**MS**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153643**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.5202	0.0040	0.5	0.0412	95.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-002BMSD	**2635-20-B01 (7-14)**	**MSD**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153644**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.5162	0.0040	0.5	0.0412	95	75	125	0.5202	0.772	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW2 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153638**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW2 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153639**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.4865	0.0040	0.5	0	97.3	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88800

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
HGLCSS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
15120065-001B	Soil		0.302	0	0	30	99.338	12/3/2015	12/3/2015
15120065-002B	Soil		0.346	0	0	30	86.705	12/3/2015	12/3/2015
15120067-001B	Soil		0.366	0	0	30	81.967	12/3/2015	12/3/2015
15120067-002B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120067-003B	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-003BMS	Soil		0.306	0	0	30	98.039	12/3/2015	12/3/2015
15120067-003BMSD	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-004B	Soil		0.358	0	0	30	83.799	12/3/2015	12/3/2015
15120067-005B	Soil		0.334	0	0	30	89.820	12/3/2015	12/3/2015
15120068-001B	Soil		0.336	0	0	30	89.286	12/3/2015	12/3/2015
15120068-002B	Soil		0.37	0	0	30	81.081	12/3/2015	12/3/2015
15120068-003B	Soil		0.307	0	0	30	97.720	12/3/2015	12/3/2015
15120068-004B	Soil		0.328	0	0	30	91.463	12/3/2015	12/3/2015
15120069-001B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120069-002B	Soil		0.32	0	0	30	93.750	12/3/2015	12/3/2015
15120069-003B	Soil		0.351	0	0	30	85.470	12/3/2015	12/3/2015
15120106-001B	Soil		0.313	0	0	30	95.847	12/4/2015	12/4/2015
15120107-001B	Soil		0.331	0	0	30	90.634	12/4/2015	12/4/2015
15120109-001B	Soil		0.33	0	0	30	90.909	12/4/2015	12/4/2015
15120109-002B	Soil		0.308	0	0	30	97.403	12/4/2015	12/4/2015
15120109-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120109-004B	Soil		0.319	0	0	30	94.044	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS1 12/3/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS1 12/3/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152172**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.3214	0.023	0.287	0.02606	103	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152173**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2946	0.022	0.2833	0.02606	94.8	75	125	0.3214	8.70	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTB 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156540**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0026	0.00020	0.0025	0	104	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156551**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0029	0.00020	0.0025	0	116	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156552**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0029	3.51	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW2 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156532**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156534**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW2 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156533**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88788

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
TCNLCSS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMS	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMSD	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-005B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-006B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS1 120315	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151856**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.1433	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS1 120315	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151857**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.43	0.25	10	0.1433	103	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	9.369	0.26	10.43	0.2084	87.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151860**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.26	10.43	0.2084	97.4	75	125	9.369	10.1	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152127	15120051-001A	SAMP	PH_S	R116638	1	12/03/2015
3152128	15120051-004A	SAMP	PH_S	R116638	1	12/03/2015
3152129	15120051-007B	SAMP	PH_S	R116638	1	12/03/2015
3152130	15120051-009B	SAMP	PH_S	R116638	1	12/03/2015
3152131	15120051-011B	SAMP	PH_S	R116638	1	12/03/2015
3152132	15120051-013B	SAMP	PH_S	R116638	1	12/03/2015
3152133	15120051-014A	SAMP	PH_S	R116638	1	12/03/2015
3152134	15120051-015B	SAMP	PH_S	R116638	1	12/03/2015
3152135	15120051-016B	SAMP	PH_S	R116638	1	12/03/2015
3152136	15120051-017B	SAMP	PH_S	R116638	1	12/03/2015
3152137	15120065-001B	SAMP	PH_S	R116638	1	12/03/2015
3152138	15120065-002B	SAMP	PH_S	R116638	1	12/03/2015
3152139	15120068-001B	SAMP	PH_S	R116638	1	12/03/2015
3152140	15120068-001BDUP	DUP	PH_S	R116638	1	12/03/2015
3152141	15120068-002B	SAMP	PH_S	R116638	1	12/03/2015
3152142	15120068-003B	SAMP	PH_S	R116638	1	12/03/2015
3152143	15120068-004B	SAMP	PH_S	R116638	1	12/03/2015
3152144	15120069-001B	SAMP	PH_S	R116638	1	12/03/2015
3152145	15120069-002B	SAMP	PH_S	R116638	1	12/03/2015
3152146	15120069-003B	SAMP	PH_S	R116638	1	12/03/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-001BDUP	**2635-20-B01 (0-7)**	**DUP**	**pH Units**	**SW9045C**	**12/3/2015**	**12/3/2015**	**PH_151203A**	**3152140**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	7.74	0	0	0	0	0	0	7.73	0.129	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116611

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3151520	PMMBLK5 12/2/15	MBLK	PMOIST	R116611	1	12/03/2015
3151521	PMLCS-S5 12/2/15	LCS	PMOIST	R116611	1	12/03/2015
3151522	PMLCS-W5 12/2/15	LCS	PMOIST	R116611	1	12/03/2015
3151523	15120056-001B	SAMP	PMOIST	R116611	1	12/03/2015
3151524	15120056-002B	SAMP	PMOIST	R116611	1	12/03/2015
3151525	15120064-001B	SAMP	PMOIST	R116611	1	12/03/2015
3151526	15120064-001BDUP	DUP	PMOIST	R116611	1	12/03/2015
3151527	15120064-002B	SAMP	PMOIST	R116611	1	12/03/2015
3151528	15120064-003B	SAMP	PMOIST	R116611	1	12/03/2015
3151529	15120064-004B	SAMP	PMOIST	R116611	1	12/03/2015
3151530	15120064-005B	SAMP	PMOIST	R116611	1	12/03/2015
3151531	15120064-006B	SAMP	PMOIST	R116611	1	12/03/2015
3152395	15120067-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152396	15120067-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152397	15120067-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152398	15120067-004B	SAMP	PMOIST	R116611	1	12/04/2015
3152399	15120067-005B	SAMP	PMOIST	R116611	1	12/04/2015
3152400	15120068-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152401	15120068-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152402	15120068-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152403	15120068-004B	SAMP	PMOIST	R116611	1	12/04/2015
3152404	15120069-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152405	15120069-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152406	15120069-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152491	15120067-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152492	15120067-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152493	15120067-003B	SAMP	PSOLID	R116611	1	12/04/2015
3152494	15120067-004B	SAMP	PSOLID	R116611	1	12/04/2015
3152495	15120067-005B	SAMP	PSOLID	R116611	1	12/04/2015
3152496	15120068-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152497	15120068-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152498	15120068-003B	SAMP	PSOLID	R116611	1	12/04/2015
3152499	15120068-004B	SAMP	PSOLID	R116611	1	12/04/2015
3152500	15120069-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152501	15120069-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152502	15120069-003B	SAMP	PSOLID	R116611	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK5 12/2/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151520**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S5 12/2/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151521**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.38	0.200	5	0	87.6	80	120	0	0		*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120068
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116611

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W5 12/2/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151522**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.82	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120064-001BDUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151526**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	17.72	0.200	0	0	0	0	0	19.16	7.81	20	*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

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

Physical Site Location (address, incldluding number and street):
5 E. Roosevelt Road (ISGS #2635-26)

City: Oakbrook Terrace State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860043° (Decimal Degrees) Longitude: -87.976842° (-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 (Illinois Route 38)

Latitude: 41.860043° Longitude: -87.976842°

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 2635-26-B01 was sampled within the construction zone adjacent to ISGS #2635-26 (Anyways). Refer to PSI Report for ISGS #2635-26 (Anyways) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120095.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	ISGS #2635-26 (Anyways)		Comparison Criteria					
BORING	2635-26-B01		MACs			TACO		
SAMPLE	2635-26-B01 (0-2)							
MATRIX	Soil							
DEPTH (feet)	0-2		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
pH	7.6							
VOCs (mg/kg)								
Acetone	**0.20**		25	--	--	70,000	100,000	--
SVOCs (mg/kg)								
Benzo(a)anthracene	**0.18**		0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	**0.22**	†	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	**0.23**		0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	**0.20**		--	--	--	--	--	--
Benzo(k)fluoranthene	**0.20**		9	--	--	9	1,700	--
Chrysene	**0.23**		88	--	--	88	17,000	--
Dibenzo(a,h)anthracene	**0.081**		0.09	0.42	0.2	0.42	17	--
Fluoranthene	**0.42**		3,100	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	**0.16**		0.9	1.6	0.9	1.6	170	--
Phenanthrene	**0.15**		--	--	--	--	--	--
Pyrene	**0.32**		2,300	--	--	2,300	61,000	--
Inorganics (mg/kg)								
Aluminum	**14,000**		--	--	--	--	--	--
Arsenic	**9.6**		11.3	13	--	13	61	--
Barium	**160**		1,500	--	--	5,500	14,000	--
Beryllium	**0.74**		22	--	--	160	410	--
Calcium	**48,000**		--	--	--	--	--	--
Chromium	**27**	†	21	--	--	230	690	--
Cobalt	**11**		20	--	--	4,700	12,000	--
Copper	**31**		2,900	--	--	2,900	8,200	--
Iron	**26,000**	†m	15,000	15,900	--	--	--	--
Lead	**120**	†	107	--	--	400	700	--
Magnesium	**24,000**		325,000	--	--	--	730,000	--
Manganese	**680**	†m	630	636	--	1,600	4,100	--
Mercury	**0.046**		0.89	--	--	10	0.1	--
Nickel	**23**		100	--	--	1,600	4,100	--
Potassium	**1,700**		--	--	--	--	--	--
Selenium	ND	U	1.3	--	--	390	1,000	--
Sodium	**250**		--	--	--	--	--	--
Thallium	ND	U	2.6	--	--	6.3	160	--
Vanadium	**34**		550	--	--	550	1,400	--
Zinc	**90**	J	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)								
Barium	**0.50**		--	--	--	--	--	2
Chromium	ND	U	--	--	--	--	--	0.1
Iron	ND	U	--	--	--	--	--	5
Lead	ND	U	--	--	--	--	--	0.0075
Manganese	**0.22**	L	--	--	--	--	--	0.15
SPLP Metals (mg/L)								
Manganese	**0.11**		--	--	--	--	--	0.15

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120095 Revision 0

RE: 1009341.0002.01, IL 38, DuPage Co, IL

Dear Dean Tiebout:

STAT Analysis received 1 sample for the referenced project on 12/3/2015 5:14:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Work Order: 15120095 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120095-001A	2635-26-B01 (0-2)		12/3/2015 10:45:00 AM	12/3/2015
15120095-001B	2635-26-B01 (0-2)		12/3/2015 10:45:00 AM	12/3/2015

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Work Order: 15120095 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120095 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120095-001

Client Sample ID: 2635-26-B01 (0-2)
Collection Date: 12/3/2015 10:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/7/2015**		Analyst: **ART**
Acetone	0.20	0.087		mg/Kg-dry	1	12/8/2015
Benzene	ND	0.0058		mg/Kg-dry	1	12/8/2015
Bromodichloromethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
Bromoform	ND	0.0058		mg/Kg-dry	1	12/8/2015
Bromomethane	ND	0.012		mg/Kg-dry	1	12/8/2015
2-Butanone	ND	0.087		mg/Kg-dry	1	12/8/2015
Carbon disulfide	ND	0.058		mg/Kg-dry	1	12/8/2015
Carbon tetrachloride	ND	0.0058		mg/Kg-dry	1	12/8/2015
Chlorobenzene	ND	0.0058		mg/Kg-dry	1	12/8/2015
Chloroethane	ND	0.012		mg/Kg-dry	1	12/8/2015
Chloroform	ND	0.0058		mg/Kg-dry	1	12/8/2015
Chloromethane	ND	0.012		mg/Kg-dry	1	12/8/2015
Dibromochloromethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,1-Dichloroethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,2-Dichloroethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,1-Dichloroethene	ND	0.0058		mg/Kg-dry	1	12/8/2015
cis-1,2-Dichloroethene	ND	0.0058		mg/Kg-dry	1	12/8/2015
trans-1,2-Dichloroethene	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,2-Dichloropropane	ND	0.0058		mg/Kg-dry	1	12/8/2015
cis-1,3-Dichloropropene	ND	0.0023		mg/Kg-dry	1	12/8/2015
trans-1,3-Dichloropropene	ND	0.0023		mg/Kg-dry	1	12/8/2015
Ethylbenzene	ND	0.0058		mg/Kg-dry	1	12/8/2015
2-Hexanone	ND	0.023		mg/Kg-dry	1	12/8/2015
4-Methyl-2-pentanone	ND	0.023		mg/Kg-dry	1	12/8/2015
Methylene chloride	ND	0.012		mg/Kg-dry	1	12/8/2015
Methyl tert-butyl ether	ND	0.0058		mg/Kg-dry	1	12/8/2015
Styrene	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,1,2,2-Tetrachloroethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
Tetrachloroethene	ND	0.0058		mg/Kg-dry	1	12/8/2015
Toluene	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,1,1-Trichloroethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
1,1,2-Trichloroethane	ND	0.0058		mg/Kg-dry	1	12/8/2015
Trichloroethene	ND	0.0058		mg/Kg-dry	1	12/8/2015
Vinyl chloride	ND	0.0058		mg/Kg-dry	1	12/8/2015
Xylenes, Total	ND	0.017		mg/Kg-dry	1	12/8/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Acenaphthene	ND	0.042		mg/Kg-dry	1	12/8/2015
Acenaphthylene	ND	0.042		mg/Kg-dry	1	12/8/2015

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter
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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120095 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120095-001

Client Sample ID: 2635-26-B01 (0-2)
Collection Date: 12/3/2015 10:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Aniline	ND	0.42		mg/Kg-dry	1	12/8/2015
Anthracene	ND	0.042		mg/Kg-dry	1	12/8/2015
Benz(a)anthracene	0.18	0.042		mg/Kg-dry	1	12/8/2015
Benzidine	ND	0.42		mg/Kg-dry	1	12/8/2015
Benzo(a)pyrene	0.22	0.042		mg/Kg-dry	1	12/8/2015
Benzo(b)fluoranthene	0.23	0.042		mg/Kg-dry	1	12/8/2015
Benzo(g,h,i)perylene	0.20	0.042		mg/Kg-dry	1	12/8/2015
Benzo(k)fluoranthene	0.20	0.042		mg/Kg-dry	1	12/8/2015
Benzoic acid	ND	1.1		mg/Kg-dry	1	12/8/2015
Benzyl alcohol	ND	0.22		mg/Kg-dry	1	12/8/2015
Bis(2-chloroethoxy)methane	ND	0.22		mg/Kg-dry	1	12/8/2015
Bis(2-chloroethyl)ether	ND	0.22		mg/Kg-dry	1	12/8/2015
Bis(2-ethylhexyl)phthalate	ND	1.1		mg/Kg-dry	1	12/8/2015
4-Bromophenyl phenyl ether	ND	0.22		mg/Kg-dry	1	12/8/2015
Butyl benzyl phthalate	ND	0.22		mg/Kg-dry	1	12/8/2015
Carbazole	ND	0.22		mg/Kg-dry	1	12/8/2015
4-Chloroaniline	ND	0.22		mg/Kg-dry	1	12/8/2015
4-Chloro-3-methylphenol	ND	0.42		mg/Kg-dry	1	12/8/2015
2-Chloronaphthalene	ND	0.22		mg/Kg-dry	1	12/8/2015
2-Chlorophenol	ND	0.22		mg/Kg-dry	1	12/8/2015
4-Chlorophenyl phenyl ether	ND	0.22		mg/Kg-dry	1	12/8/2015
Chrysene	0.23	0.042		mg/Kg-dry	1	12/8/2015
Dibenz(a,h)anthracene	0.081	0.042		mg/Kg-dry	1	12/8/2015
Dibenzofuran	ND	0.22		mg/Kg-dry	1	12/8/2015
1,2-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/8/2015
1,3-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/8/2015
1,4-Dichlorobenzene	ND	0.22		mg/Kg-dry	1	12/8/2015
3,3´-Dichlorobenzidine	ND	0.22		mg/Kg-dry	1	12/8/2015
2,4-Dichlorophenol	ND	0.22		mg/Kg-dry	1	12/8/2015
Diethyl phthalate	ND	0.22		mg/Kg-dry	1	12/8/2015
2,4-Dimethylphenol	ND	0.22		mg/Kg-dry	1	12/8/2015
Dimethyl phthalate	ND	0.22		mg/Kg-dry	1	12/8/2015
4,6-Dinitro-2-methylphenol	ND	0.42		mg/Kg-dry	1	12/8/2015
2,4-Dinitrophenol	ND	1.1		mg/Kg-dry	1	12/8/2015
2,4-Dinitrotoluene	ND	0.042		mg/Kg-dry	1	12/8/2015
2,6-Dinitrotoluene	ND	0.042		mg/Kg-dry	1	12/8/2015
Di-n-butyl phthalate	ND	0.22		mg/Kg-dry	1	12/8/2015
Di-n-octyl phthalate	ND	0.22		mg/Kg-dry	1	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120095 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120095-001

Client Sample ID: 2635-26-B01 (0-2)
Collection Date: 12/3/2015 10:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Fluoranthene	0.42	0.042		mg/Kg-dry	1	12/8/2015
Fluorene	ND	0.042		mg/Kg-dry	1	12/8/2015
Hexachlorobenzene	ND	0.22		mg/Kg-dry	1	12/8/2015
Hexachlorobutadiene	ND	0.22		mg/Kg-dry	1	12/8/2015
Hexachlorocyclopentadiene	ND	0.22		mg/Kg-dry	1	12/8/2015
Hexachloroethane	ND	0.22		mg/Kg-dry	1	12/8/2015
Indeno(1,2,3-cd)pyrene	0.16	0.042		mg/Kg-dry	1	12/8/2015
Isophorone	ND	0.22		mg/Kg-dry	1	12/8/2015
2-Methylnaphthalene	ND	0.22		mg/Kg-dry	1	12/8/2015
2-Methylphenol	ND	0.22		mg/Kg-dry	1	12/8/2015
4-Methylphenol	ND	0.22		mg/Kg-dry	1	12/8/2015
Naphthalene	ND	0.042		mg/Kg-dry	1	12/8/2015
2-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/8/2015
3-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/8/2015
4-Nitroaniline	ND	0.22		mg/Kg-dry	1	12/8/2015
2-Nitrophenol	ND	0.22		mg/Kg-dry	1	12/8/2015
4-Nitrophenol	ND	0.42		mg/Kg-dry	1	12/8/2015
Nitrobenzene	ND	0.042		mg/Kg-dry	1	12/8/2015
N-Nitrosodi-n-propylamine	ND	0.042		mg/Kg-dry	1	12/8/2015
N-Nitrosodimethylamine	ND	0.22		mg/Kg-dry	1	12/8/2015
N-Nitrosodiphenylamine	ND	0.22		mg/Kg-dry	1	12/8/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.22		mg/Kg-dry	1	12/8/2015
Pentachlorophenol	ND	0.085		mg/Kg-dry	1	12/8/2015
Phenanthrene	0.15	0.042		mg/Kg-dry	1	12/8/2015
Phenol	ND	0.22		mg/Kg-dry	1	12/8/2015
Pyrene	0.32	0.042		mg/Kg-dry	1	12/8/2015
Pyridine	ND	0.85		mg/Kg-dry	1	12/8/2015
1,2,4-Trichlorobenzene	ND	0.22		mg/Kg-dry	1	12/8/2015
2,4,5-Trichlorophenol	ND	0.22		mg/Kg-dry	1	12/8/2015
2,4,6-Trichlorophenol	ND	0.22		mg/Kg-dry	1	12/8/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/7/2015**		Analyst: **JG**
Aluminum	14000	240		mg/Kg-dry	100	12/7/2015
Antimony	ND	2.4		mg/Kg-dry	10	12/8/2015
Arsenic	9.6	1.2		mg/Kg-dry	10	12/8/2015
Barium	160	1.2		mg/Kg-dry	10	12/8/2015
Beryllium	0.74	0.61		mg/Kg-dry	10	12/8/2015
Cadmium	ND	0.61		mg/Kg-dry	10	12/8/2015
Calcium	48000	73		mg/Kg-dry	10	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120095 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120095-001

Client Sample ID: 2635-26-B01 (0-2)
Collection Date: 12/3/2015 10:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/7/2015**		Analyst: **JG**
Chromium	27	1.2		mg/Kg-dry	10	12/8/2015
Cobalt	11	1.2		mg/Kg-dry	10	12/8/2015
Copper	31	3.1		mg/Kg-dry	10	12/8/2015
Iron	26000	370		mg/Kg-dry	100	12/7/2015
Lead	120	0.61		mg/Kg-dry	10	12/8/2015
Magnesium	24000	37		mg/Kg-dry	10	12/8/2015
Manganese	680	1.2		mg/Kg-dry	10	12/8/2015
Nickel	23	1.2		mg/Kg-dry	10	12/8/2015
Potassium	1700	37		mg/Kg-dry	10	12/8/2015
Selenium	ND	1.2		mg/Kg-dry	10	12/8/2015
Silver	ND	1.2		mg/Kg-dry	10	12/8/2015
Sodium	250	73		mg/Kg-dry	10	12/8/2015
Thallium	ND	1.2		mg/Kg-dry	10	12/8/2015
Vanadium	34	1.2		mg/Kg-dry	10	12/8/2015
Zinc	90	6.1		mg/Kg-dry	10	12/8/2015
SPLP Metals by ICP/MS	**SW1312/6020 (SW3005A)**			Prep Date: **12/7/2015**		Analyst: **JG**
Manganese	0.11	0.0040		mg/L	2	12/8/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/7/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.50	0.050		mg/L	5	12/8/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	0.44	0.10	*	mg/L	5	12/8/2015
Cadmium	ND	0.0050		mg/L	5	12/8/2015
Chromium	ND	0.010		mg/L	5	12/8/2015
Cobalt	ND	0.010		mg/L	5	12/8/2015
Iron	ND	0.25		mg/L	5	12/8/2015
Lead	ND	0.0050		mg/L	5	12/8/2015
Manganese	0.22	0.010		mg/L	5	12/8/2015
Nickel	ND	0.020		mg/L	5	12/8/2015
Selenium	ND	0.010		mg/L	5	12/8/2015
Silver	ND	0.010		mg/L	5	12/8/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/8/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015

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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120095 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Lab ID: 15120095-001

Client Sample ID: 2635-26-B01 (0-2)
Collection Date: 12/3/2015 10:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	**SW7471A**			Prep Date: **12/4/2015**		Analyst: **LB**
Mercury	0.046	0.024		mg/Kg-dry	1	12/4/2015
Cyanide, Total	**SW9012A**			Prep Date: **12/4/2015**		Analyst: **YZ**
Cyanide	ND	0.32		mg/Kg-dry	1	12/9/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/4/2015**		Analyst: **PBG**
pH	7.6			pH Units	1	12/4/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	21.9	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	78.1	0.20	*	wt%	1	12/4/2015

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e-mail address: STATinfo@STATAnalysis.com ***AIHA, NVLAP and NELAP accredited***

CHAIN OF CUSTODY RECORD

Nº: 860060 **Page :** ____ **of** ____

Company: EaE
Project Number: 1009341.0002.01 Client Tracking No.:
Project Name: IL 38
Project Location: DuPage Co. IL
Sampler(s): S.S.
Report To: Tiebart Phone: 312 578 9293
Cooper Fax: 312 578 9345
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail: Dtiebart@eae.com

P.O. No.:
Quote No.:

Turn Around: 10 day
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	TOTAL Metals	TCLP/SPLP Metals	pH & Solids	Remarks	Lab No.:
2635-2C-B01(0-2)	12/3/15	1045	S		X	AF	4	X	X	X	X	X		091

Relinquished by: (Signature) Date/Time: 12/3/15 1255
Received by: (Signature) Date/Time: 12/3/15 12:5
Relinquished by: (Signature) Date/Time: 12/3/15 17:10
Received by: (Signature) Date/Time: 12/3/15 17:14
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments:

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120095

Received on Ice: Yes ☑ No ☐
Temperature: 4.2 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E

Date and Time Received: 12/3/2015 5:14:00 PM

Work Order Number 15120095

Received by: MGK

Checklist completed by: Martin Kwan 12/3/15 (Signature / Date)

Reviewed by: MGK 12/4/15 (Initials / Date)

Matrix:

Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 4.2 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120815-3	103	97.9	108	105				
VLCS120815-3	106	100	113	107				
VLCSD120815-3	105	101	112	103				
15120095-001A	75.4	95.5	126	121				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3155350	BFB120815-3	TUNE	BFB	R116763	1	12/08/2015 08:35
3155351	VSTD050r	CCV	VOC_ENCORE+	R116763	1	12/08/2015 09:34
3155352	VBLK120815-3	MBLK	VOC_ENCORE+	R116763	1	12/08/2015 10:10
3155353	VLCS120815-3	LCS	VOC_ENCORE+	R116763	1	12/08/2015 10:46
3155354	VLCSD120815-3	LCSD	VOC_ENCORE+	R116763	1	12/08/2015 11:22
3155355	15120109-004A	SAMP	BTEX+_5035	88818	1	12/08/2015 11:59
3155356	15120109-001A	SAMP	VOC_5035	88817	1	12/08/2015 12:36
3155357	15120109-003A	SAMP	VOC_5035	88817	1	12/08/2015 13:12
3155358	15120093-001A	SAMP	VOC_5035	88870	1	12/08/2015 13:49
3155359	15120093-002A	SAMP	VOC_5035	88870	1	12/08/2015 14:26
3155360	15120093-003A	SAMP	VOC_5035	88870	1	12/08/2015 15:02
3155361	15120095-001A	SAMP	VOC_5035	88870	1	12/08/2015 15:39
3155362	15120097-001A	SAMP	VOC_5035	88870	1	12/08/2015 16:16
3155383	15120100-001A	SAMP	VOC_5035	88870	1	12/08/2015 16:52
3155385	15120106-001A	SAMP	VOC_5035	88843	1	12/08/2015 17:28
3155414	15120107-001A	SAMP	VOC_5035	88843	1	12/08/2015 18:04
3155420	15120150-001A	SAMP	VOC_5035	88843	1	12/08/2015 18:41
3155765	15120150-001A	SAMP	VOC_5035+	88843	1	12/08/2015 18:41
3155430	15120145-001A	RA	VOC_5035	88843	1	12/08/2015 19:17

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120815-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155352**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116763

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120815-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155352**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethylbenzene	0.0001	0.0050									J
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120815-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155353**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.0515	0.0050	0.05	0	103	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04802	0.0050	0.05	0	96	70	130	0	0		
1,1,2-Trichloroethane	0.05045	0.0050	0.05	0	101	70	130	0	0		
1,1-Dichloroethane	0.04897	0.0050	0.05	0	97.9	70	130	0	0		
1,1-Dichloroethene	0.05095	0.0050	0.05	0	102	70	130	0	0		
1,2-Dichloroethane	0.05138	0.0050	0.05	0	103	70	130	0	0		
1,2-Dichloropropane	0.0491	0.0050	0.05	0	98.2	70	130	0	0		
2-Butanone	0.1039	0.075	0.1	0	104	70	130	0	0		
2-Hexanone	0.09969	0.020	0.1	0	99.7	70	130	0	0		
4-Methyl-2-pentanone	0.1027	0.020	0.1	0	103	70	130	0	0		
Acetone	0.09746	0.075	0.1	0	97.5	50	150	0	0		
Benzene	0.04819	0.0050	0.05	0	96.4	70	130	0	0		
Bromodichloromethane	0.05318	0.0050	0.05	0	106	70	130	0	0		
Bromoform	0.05592	0.0050	0.05	0	112	70	130	0	0		
Bromomethane	0.0499	0.010	0.05	0	99.8	70	130	0	0		
Carbon disulfide	0.1062	0.050	0.1	0	106	70	130	0	0		
Carbon tetrachloride	0.0531	0.0050	0.05	0	106	70	130	0	0		
Chlorobenzene	0.04983	0.0050	0.05	0	99.7	70	130	0	0		
Chloroethane	0.05535	0.010	0.05	0	111	70	130	0	0		
Chloroform	0.05294	0.0050	0.05	0	106	70	130	0	0		
Chloromethane	0.04846	0.010	0.05	0	96.9	70	130	0	0		
cis-1,2-Dichloroethene	0.05058	0.0050	0.05	0	101	70	130	0	0		
cis-1,3-Dichloropropene	0.05016	0.0020	0.05	0	100	70	130	0	0		
Dibromochloromethane	0.05432	0.0050	0.05	0	109	70	130	0	0		
Ethylbenzene	0.04951	0.0050	0.05	0.0001	98.8	70	130	0	0		
Methyl tert-butyl ether	0.05678	0.0050	0.05	0	114	70	130	0	0		
Methylene chloride	0.04788	0.010	0.05	0	95.8	70	130	0	0		
Styrene	0.05244	0.0050	0.05	0	105	70	130	0	0		
Tetrachloroethene	0.05102	0.0050	0.05	0	102	70	130	0	0		
Toluene	0.05015	0.0050	0.05	0	100	70	130	0	0		
trans-1,2-Dichloroethene	0.0566	0.0050	0.05	0	113	70	130	0	0		
trans-1,3-Dichloropropene	0.05203	0.0020	0.05	0	104	70	130	0	0		
Trichloroethene	0.05095	0.0050	0.05	0	102	70	130	0	0		
Vinyl chloride	0.05162	0.0050	0.05	0	103	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120815-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155353**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Xylenes, Total	0.1524	0.015	0.15	0	102	70	130	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120815-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155354**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.05084	0.0050	0.05	0	102	70	130	0.0515	1.29	20	
1,1,2,2-Tetrachloroethane	0.04709	0.0050	0.05	0	94.2	70	130	0.04802	1.96	20	
1,1,2-Trichloroethane	0.04944	0.0050	0.05	0	98.9	70	130	0.05045	2.02	20	
1,1-Dichloroethane	0.04734	0.0050	0.05	0	94.7	70	130	0.04897	3.38	20	
1,1-Dichloroethene	0.04965	0.0050	0.05	0	99.3	70	130	0.05095	2.58	20	
1,2-Dichloroethane	0.04904	0.0050	0.05	0	98.1	70	130	0.05138	4.66	20	
1,2-Dichloropropane	0.048	0.0050	0.05	0	96	70	130	0.0491	2.27	20	
2-Butanone	0.1009	0.075	0.1	0	101	70	130	0.1039	2.92	20	
2-Hexanone	0.09829	0.020	0.1	0	98.3	70	130	0.09969	1.41	20	
4-Methyl-2-pentanone	0.09973	0.020	0.1	0	99.7	70	130	0.1027	2.90	20	
Acetone	0.09122	0.075	0.1	0	91.2	50	150	0.09746	6.61	20	
Benzene	0.04698	0.0050	0.05	0	94	70	130	0.04819	2.54	20	
Bromodichloromethane	0.05105	0.0050	0.05	0	102	70	130	0.05318	4.09	20	
Bromoform	0.05527	0.0050	0.05	0	111	70	130	0.05592	1.17	20	
Bromomethane	0.04824	0.010	0.05	0	96.5	70	130	0.0499	3.38	20	
Carbon disulfide	0.1024	0.050	0.1	0	102	70	130	0.1062	3.71	20	
Carbon tetrachloride	0.05009	0.0050	0.05	0	100	70	130	0.0531	5.83	20	
Chlorobenzene	0.04766	0.0050	0.05	0	95.3	70	130	0.04983	4.45	20	
Chloroethane	0.0506	0.010	0.05	0	101	70	130	0.05535	8.97	20	
Chloroform	0.05136	0.0050	0.05	0	103	70	130	0.05294	3.03	20	
Chloromethane	0.04552	0.010	0.05	0	91	70	130	0.04846	6.26	20	
cis-1,2-Dichloroethene	0.04786	0.0050	0.05	0	95.7	70	130	0.05058	5.53	20	
cis-1,3-Dichloropropene	0.0489	0.0020	0.05	0	97.8	70	130	0.05016	2.54	20	
Dibromochloromethane	0.05335	0.0050	0.05	0	107	70	130	0.05432	1.80	20	
Ethylbenzene	0.04694	0.0050	0.05	0.0001	93.7	70	130	0.04951	5.33	20	
Methyl tert-butyl ether	0.05581	0.0050	0.05	0	112	70	130	0.05678	1.72	20	
Methylene chloride	0.04724	0.010	0.05	0	94.5	70	130	0.04788	1.35	20	
Styrene	0.05012	0.0050	0.05	0	100	70	130	0.05244	4.52	20	
Tetrachloroethene	0.04787	0.0050	0.05	0	95.7	70	130	0.05102	6.37	20	
Toluene	0.04845	0.0050	0.05	0	96.9	70	130	0.05015	3.45	20	
trans-1,2-Dichloroethene	0.05496	0.0050	0.05	0	110	70	130	0.0566	2.94	20	
trans-1,3-Dichloropropene	0.05056	0.0020	0.05	0	101	70	130	0.05203	2.87	20	
Trichloroethene	0.04827	0.0050	0.05	0	96.5	70	130	0.05095	5.40	20	
Vinyl chloride	0.04901	0.0050	0.05	0	98	70	130	0.05162	5.19	20	
Xylenes, Total	0.1441	0.015	0.15	0	96.1	70	130	0.1524	5.60	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
MB-88850-SVOC	67.2	67.1	67.4	84.9	66.3	71.0	75.0	82.3
LCS-88850-SVOC	75.7	77.2	82.4	93.1	71.7	77.5	81.8	79.3
15120178-001AMS	52.7	51.9	58.5	90.7	49.1	58.1	66.7	81.6
15120178-001AMSD	53.4	52.4	57.9	88.3	48.8	57.8	65.8	77.9
15120095-001B	62.2	59.6	62.1	79.5	58.7	66.8	68.2	71.6

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88850-SVOC			0.03	0	0	1	33.333	12/7/2015	12/7/2015
LCS-88850-SVOC			0.03	0	0	1	33.333	12/7/2015	12/7/2015
15120093-001B	Soil		0.03046	0	0	1	32.830	12/7/2015	12/7/2015
15120093-002B	Soil		0.03034	0	0	1	32.960	12/7/2015	12/7/2015
15120093-003B	Soil		0.03031	0	0	1	32.992	12/7/2015	12/7/2015
15120094-001B	Soil		0.03047	0	0	1	32.819	12/7/2015	12/7/2015
15120094-002B	Soil		0.0301	0	0	1	33.223	12/7/2015	12/7/2015
15120094-003B	Soil		0.03009	0	0	1	33.234	12/7/2015	12/7/2015
15120094-004B	Soil		0.03002	0	0	1	33.311	12/7/2015	12/7/2015
15120094-005B	Soil		0.03016	0	0	1	33.156	12/7/2015	12/7/2015
15120095-001B	Soil		0.03021	0	0	1	33.102	12/7/2015	12/7/2015
15120097-001B	Soil		0.03007	0	0	1	33.256	12/7/2015	12/7/2015
15120100-001B	Soil		0.03003	0	0	1	33.300	12/7/2015	12/7/2015
15120145-001B	Soil		0.03029	0	0	1	33.014	12/7/2015	12/7/2015
15120150-001B	Soil		0.03035	0	0	1	32.949	12/7/2015	12/7/2015
15120152-001B	Soil		0.03003	0	0	1	33.300	12/7/2015	12/7/2015
15120152-002B	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015
15120156-001B	Soil		0.03036	0	0	1	32.938	12/7/2015	12/7/2015
15120156-002B	Soil		0.03047	0	0	1	32.819	12/7/2015	12/7/2015
15120156-003B	Soil		0.03021	0	0	1	33.102	12/7/2015	12/7/2015
15120156-004B	Soil		0.03024	0	0	1	33.069	12/7/2015	12/7/2015
15120178-001A	Soil		0.03022	0	0	1	33.091	12/7/2015	12/7/2015
15120178-001AMS	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015
15120178-001AMSD	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88850

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88850

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88850-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154656**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.395	0.033	1.667	0	83.7	37	134	0	0		
4-Chloro-3-methylphenol	2.815	0.33	3.333	0	84.4	29	134	0	0		
2-Chlorophenol	2.614	0.17	3.333	0	78.4	29	105	0	0		
1,4-Dichlorobenzene	1.331	0.17	1.667	0	79.8	26	111	0	0		
2,4-Dinitrotoluene	1.501	0.033	1.667	0	90	46	125	0	0		
4-Nitrophenol	3.212	0.33	3.333	0	96.4	12	146	0	0		
N-Nitrosodi-n-propylamine	1.359	0.033	1.667	0	81.5	29	109	0	0		
Pentachlorophenol	2.983	0.067	3.333	0	89.5	10	192	0	0		
Phenol	2.57	0.17	3.333	0	77.1	27	104	0	0		
Pyrene	1.34	0.033	1.667	0	80.4	42	148	0	0		
1,2,4-Trichlorobenzene	1.371	0.17	1.667	0	82.3	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120178-001AMS	**ZZZZZ**	**MS**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154657**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.569	0.033	1.653	0.1271	87.2	24	139	0	0		
4-Chloro-3-methylphenol	2.514	0.33	3.305	0	76	28	121	0	0		
2-Chlorophenol	1.827	0.17	3.305	0	55.3	21	102	0	0		
1,4-Dichlorobenzene	0.8846	0.17	1.653	0	53.5	27	95	0	0		
2,4-Dinitrotoluene	1.435	0.033	1.653	0	86.8	32	127	0	0		
4-Nitrophenol	2.729	0.33	3.305	0	82.6	10	156	0	0		
N-Nitrosodi-n-propylamine	0.9521	0.033	1.653	0	57.6	16	122	0	0		
Pentachlorophenol	2.693	0.066	3.305	0	81.5	10	204	0	0		
Phenol	1.909	0.17	3.305	0	57.8	20	103	0	0		
Pyrene	6.25	0.033	1.653	2.389	234	10	184	0	0		SE
1,2,4-Trichlorobenzene	0.9769	0.17	1.653	0	59.1	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120178-001AMSD	**ZZZZZ**	**MSD**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154658**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.252	0.033	1.653	0.1271	68	24	139	1.569	22.5	57	
4-Chloro-3-methylphenol	2.433	0.33	3.305	0	73.6	28	121	2.514	3.25	88	
2-Chlorophenol	1.806	0.17	3.305	0	54.6	21	102	1.827	1.16	49	
1,4-Dichlorobenzene	0.874	0.17	1.653	0	52.9	27	95	0.8846	1.20	43	
2,4-Dinitrotoluene	1.362	0.033	1.653	0	82.4	32	127	1.435	5.27	37	
4-Nitrophenol	2.699	0.33	3.305	0	81.6	10	156	2.729	1.11	56	
N-Nitrosodi-n-propylamine	0.9583	0.033	1.653	0	58	16	122	0.9521	0.658	47	
Pentachlorophenol	2.721	0.066	3.305	0	82.3	10	204	2.693	1.04	47	
Phenol	1.852	0.17	3.305	0	56	20	103	1.909	3.04	66	
Pyrene	2.701	0.033	1.653	2.389	18.9	10	184	6.25	79.3	51	R
1,2,4-Trichlorobenzene	0.9755	0.17	1.653	0	59	55	106	0.9769	0.135	23	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS3 12/7/15			1	0	0	50	50.000	12/7/2015	12/7/2015
ILCSS3 12/7/15			1	0	0	50	50.000	12/7/2015	12/7/2015
15120094-001B	Soil		1.027	0	0	50	48.685	12/7/2015	12/7/2015
15120094-002B	Soil		1.09	0	0	50	45.872	12/7/2015	12/7/2015
15120094-003B	Soil		1.036	0	0	50	48.263	12/7/2015	12/7/2015
15120094-004B	Soil		1.065	0	0	50	46.948	12/7/2015	12/7/2015
15120094-005B	Soil		1.056	0	0	50	47.348	12/7/2015	12/7/2015
15120093-001B	Soil		1.083	0	0	50	46.168	12/7/2015	12/7/2015
15120093-002B	Soil		1.069	0	0	50	46.773	12/7/2015	12/7/2015
15120093-003B	Soil		1.046	0	0	50	47.801	12/7/2015	12/7/2015
15120095-001B	Soil		1.048	0	0	50	47.710	12/7/2015	12/7/2015
15120097-001B	Soil		1.08	0	0	50	46.296	12/7/2015	12/7/2015
15120100-001B	Soil		1.085	0	0	50	46.083	12/7/2015	12/7/2015
15120109-001B	Soil		1.088	0	0	50	45.956	12/7/2015	12/7/2015
15120109-002B	Soil		1.094	0	0	50	45.704	12/7/2015	12/7/2015
15120109-003B	Soil		1.048	0	0	50	47.710	12/7/2015	12/7/2015
15120109-004B	Soil		1.012	0	0	50	49.407	12/7/2015	12/7/2015
15120109-004BMS	Soil		1.021	0	0	50	48.972	12/7/2015	12/7/2015
15120109-004BMSD	Soil		1.014	0	0	50	49.310	12/7/2015	12/7/2015
15120152-001B	Soil		1.087	0	0	50	45.998	12/7/2015	12/7/2015
15120152-002B	Soil		1.02	0	0	50	49.020	12/7/2015	12/7/2015
15120197-001A	Soil		1.037	0	0	50	48.216	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS3 12/7/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154398**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	0.2325	1.0									J
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	0.086	0.50									J
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.086	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	ND	0.25									
Sodium	ND	30									
Thallium	ND	0.50									
Vanadium	ND	0.50									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS3 12/7/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154398**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS3 12/7/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154399**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	25.02	10	25	0	100	80	120	0	0		
Arsenic	24.2	0.50	25	0	96.8	80	120	0	0		
Barium	27.04	0.50	25	0	108	80	120	0	0		
Beryllium	23.7	0.25	25	0	94.8	80	120	0	0		
Cadmium	25.4	0.25	25	0	102	80	120	0	0		
Calcium	99.5	30	100	0	99.5	80	120	0	0		
Chromium	24.72	0.50	25	0.086	98.5	80	120	0	0		
Cobalt	24.96	0.50	25	0	99.8	80	120	0	0		
Copper	24.24	1.2	25	0	96.9	80	120	0	0		
Iron	102.5	15	100	0	103	80	120	0	0		
Lead	26	0.25	25	0.086	104	80	120	0	0		
Magnesium	96.6	15	100	0	96.6	80	120	0	0		
Manganese	24.84	0.50	25	0	99.4	80	120	0	0		
Nickel	24.24	0.50	25	0	97	80	120	0	0		
Potassium	100.8	15	100	0	101	80	120	0	0		
Selenium	23.28	0.25	25	0	93.1	80	120	0	0		
Silver	11	0.25	10	0	110	80	120	0	0		
Sodium	94.75	30	100	0	94.8	80	120	0	0		
Thallium	25.36	0.50	25	0	101	80	120	0	0		
Vanadium	23.36	0.50	25	0	93.4	80	120	0	0		
Zinc	19.96	2.5	25	0	79.8	80	120	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS3 12/7/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154819**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	20.02	1.0	12.5	0.2325	158	80	120	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	11920	240	29.86	11620	997	75	125	0	0		S
Iron	39900	360	119.4	36690	2680	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154439**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	45.79	1.2	29.86	14.47	105	75	125	0	0		
Barium	81.52	1.2	29.86	79.96	5.24	75	125	0	0		S
Beryllium	29.04	0.60	29.86	0.5435	95.4	75	125	0	0		
Cadmium	30.33	0.60	29.86	0.2494	101	75	125	0	0		
Calcium	49180	72	119.4	48330	708	75	125	0	0		S
Chromium	45.42	1.2	29.86	17.49	93.5	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154439**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	44.16	1.2	29.86	18.51	85.9	75	125	0	0		
Copper	51.76	3.0	29.86	24.7	90.6	75	125	0	0		
Lead	48.27	0.60	29.86	16.3	107	75	125	0	0		
Magnesium	20340	36	119.4	20350	-10.2	75	125	0	0		S
Manganese	411.3	1.2	29.86	425.6	-47.8	75	125	0	0		S
Nickel	60.56	1.2	29.86	36.46	80.7	75	125	0	0		
Potassium	2404	36	119.4	2237	139	75	125	0	0		S
Selenium	28.95	0.60	29.86	1.443	92.1	75	125	0	0		
Silver	12.08	0.60	11.94	0.08194	100	75	125	0	0		
Sodium	158.3	72	119.4	55.46	86.1	75	125	0	0		
Thallium	29.7	1.2	29.86	0.6658	97.2	75	125	0	0		
Vanadium	46.78	1.2	29.86	19.47	91.4	75	125	0	0		
Zinc	66.83	6.0	29.86	43.89	76.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154824**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	6.348	2.4	14.93	1.889	29.9	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154402**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	11540	240	30.07	11620	-276	75	125	11920	3.25	20	S
Iron	40150	360	120.3	36690	2870	75	125	39900	0.628	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154442**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	44.43	1.2	30.07	14.47	99.6	75	125	45.79	3.01	20	
Barium	92.91	1.2	30.07	79.96	43.1	75	125	81.52	13.1	20	S
Beryllium	29.01	0.60	30.07	0.5435	94.7	75	125	29.04	0.0967	20	
Cadmium	30.93	0.60	30.07	0.2494	102	75	125	30.33	1.96	20	
Calcium	47100	72	120.3	48330	-1020	75	125	49180	4.32	20	S
Chromium	45.98	1.2	30.07	17.49	94.8	75	125	45.42	1.24	20	
Cobalt	44.05	1.2	30.07	18.51	84.9	75	125	44.16	0.263	20	
Copper	53.04	3.0	30.07	24.7	94.3	75	125	51.76	2.44	20	
Lead	47.4	0.60	30.07	16.3	103	75	125	48.27	1.83	20	
Magnesium	19850	36	120.3	20350	-418	75	125	20340	2.44	20	S
Manganese	421.4	1.2	30.07	425.6	-13.8	75	125	411.3	2.43	20	S
Nickel	62.36	1.2	30.07	36.46	86.1	75	125	60.56	2.93	20	
Potassium	2382	36	120.3	2237	120	75	125	2404	0.915	20	
Selenium	28	0.60	30.07	1.443	88.3	75	125	28.95	3.33	20	
Silver	12.15	0.60	12.03	0.08194	100	75	125	12.08	0.540	20	
Sodium	154.7	72	120.3	55.46	82.5	75	125	158.3	2.30	20	
Thallium	29.46	1.2	30.07	0.6658	95.8	75	125	29.7	0.811	20	
Vanadium	47.66	1.2	30.07	19.47	93.8	75	125	46.78	1.87	20	
Zinc	67.53	6.0	30.07	43.89	78.6	75	125	66.83	1.04	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88855

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154825**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	5.909	2.4	15.03	1.889	26.7	75	125	6.348	7.16	20	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88867

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW2 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
ILCSW2 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
IMBSPLP 12/4/15			50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMS	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMSD	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-004B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-005B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120095-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120097-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120100-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBSPLP 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1312/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155469**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.0002937	0.0040									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1312/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155472**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.6119	0.0040	0.5	0.03454	115	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1312/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155473**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.5283	0.0040	0.5	0.03454	98.7	75	125	0.6119	14.7	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW2 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155491**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW2 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155468**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.537	0.0040	0.5	0	107	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88869

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
ILCSW3 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
IMBTA1 12/4/15			50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMS	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMSD	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-004B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-005B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120095-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120097-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120100-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155493**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	ND	0.015									
Barium	0.02875	0.050									J
Beryllium	ND	0.0050									
Boron	0.5274	0.20									*
Cadmium	ND	0.0050									
Chromium	0.003406	0.010									J
Cobalt	0.000459	0.010									J
Iron	ND	0.25									
Lead	0.001541	0.0050									J
Manganese	0.00106	0.010									J
Nickel	0.002965	0.020									J
Selenium	ND	0.010									
Silver	ND	0.010									
Thallium	0.001742	0.0050									J
Zinc	0.01217	0.050									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156298**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	0.8081	0.050	0.5	0.2401	114	75	125	0	0		
Boron	0.8592	0.20	0.5	0.3525	101	75	125	0	0		*
Cadmium	0.4302	0.0050	0.5	0	86	75	125	0	0		
Chromium	0.4781	0.010	0.5	0.00094	95.4	75	125	0	0		
Cobalt	0.6679	0.010	0.5	0.2015	93.3	75	125	0	0		
Iron	5.87	0.25	2	3.943	96.4	75	125	0	0		
Lead	0.5383	0.0050	0.5	0.01087	105	75	125	0	0		
Manganese	2.941	0.010	0.5	2.487	90.8	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156298**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nickel	0.7782	0.020	0.5	0.378	80	75	125	0	0		
Selenium	0.4658	0.010	0.5	0.02	89.2	75	125	0	0		
Silver	0.1689	0.010	0.2	0.00065	84.1	75	125	0	0		
Zinc	0.3715	0.050	0.5	0.02575	69.2	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158971**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3312	0.0060	0.25	0	132	75	125	0	0		S
Beryllium	0.5386	0.0020	0.5	0	108	75	125	0	0		
Thallium	0.5698	0.0020	0.5	0.002182	114	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156299**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	0.7951	0.050	0.5	0.2401	111	75	125	0.8081	1.62	20	
Boron	0.8348	0.20	0.5	0.3525	96.5	75	125	0.8592	2.88	20	*
Cadmium	0.4272	0.0050	0.5	0	85.4	75	125	0.4302	0.700	20	
Chromium	0.4827	0.010	0.5	0.00094	96.4	75	125	0.4781	0.958	20	
Cobalt	0.6611	0.010	0.5	0.2015	91.9	75	125	0.6679	1.02	20	
Iron	5.62	0.25	2	3.943	83.8	75	125	5.87	4.35	20	
Lead	0.534	0.0050	0.5	0.01087	105	75	125	0.5383	0.802	20	
Manganese	2.838	0.010	0.5	2.487	70.2	75	125	2.941	3.56	20	S
Nickel	0.7738	0.020	0.5	0.378	79.2	75	125	0.7782	0.567	20	
Selenium	0.4684	0.010	0.5	0.02	89.7	75	125	0.4658	0.557	20	
Silver	0.1688	0.010	0.2	0.00065	84.1	75	125	0.1689	0.0592	20	
Zinc	0.3684	0.050	0.5	0.02575	68.5	75	125	0.3715	0.838	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158972**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3046	0.0060	0.25	0	122	75	125	0.3312	8.38	20	
Beryllium	0.4982	0.0020	0.5	0	99.6	75	125	0.5386	7.79	20	
Thallium	0.5197	0.0020	0.5	0.002182	104	75	125	0.5698	9.18	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156295**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00103	0.0060									J
Barium	ND	0.0040									
Beryllium	ND	0.0020									
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	ND	0.10									
Lead	0.00081	0.0020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156295**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.0017	0.0040									J
Silver	0.00022	0.0040									J
Thallium	0.00043	0.0020									J
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155492**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.2656	0.0060	0.25	0.0009908	106	80	120	0	0		
Barium	0.4833	0.0040	0.5	0	96.7	80	120	0	0		
Beryllium	0.4654	0.0020	0.5	0	93.1	80	120	0	0		
Boron	0.476	0.080	0.5	0	95.2	80	120	0	0		
Cadmium	0.4918	0.0020	0.5	0	98.4	80	120	0	0		
Lead	0.4945	0.0020	0.5	0.001048	98.7	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156296**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.4722	0.0040	0.5	0	94.4	80	120	0	0		
Cobalt	0.4685	0.0040	0.5	0	93.7	80	120	0	0		
Iron	1.888	0.10	2	0	94.4	80	120	0	0		
Manganese	0.4606	0.0040	0.5	0	92.1	80	120	0	0		
Nickel	0.4353	0.0040	0.5	0	87.1	80	120	0	0		
Selenium	0.4573	0.0040	0.5	0.0017	91.1	80	120	0	0		
Silver	0.1883	0.0040	0.2	0.00022	94	80	120	0	0		
Thallium	0.4691	0.0020	0.5	0.00043	93.7	80	120	0	0		
Zinc	0.4127	0.020	0.5	0	82.5	80	120	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88824

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS2 12/4/15			0.3	0	0	30	100.000	12/4/2015	12/4/2015
HGLCSS2 12/4/15			0.3	0	0	30	100.000	12/4/2015	12/4/2015
15120093-001B	Soil		0.342	0	0	30	87.719	12/4/2015	12/4/2015
15120093-002B	Soil		0.329	0	0	30	91.185	12/4/2015	12/4/2015
15120093-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120093-003BMS	Soil		0.342	0	0	30	87.719	12/4/2015	12/4/2015
15120093-003BMSD	Soil		0.343	0	0	30	87.464	12/4/2015	12/4/2015
15120094-001B	Soil		0.333	0	0	30	90.090	12/4/2015	12/4/2015
15120094-002B	Soil		0.343	0	0	30	87.464	12/4/2015	12/4/2015
15120094-003B	Soil		0.348	0	0	30	86.207	12/4/2015	12/4/2015
15120094-004B	Soil		0.318	0	0	30	94.340	12/4/2015	12/4/2015
15120094-005B	Soil		0.348	0	0	30	86.207	12/4/2015	12/4/2015
15120095-001B	Soil		0.318	0	0	30	94.340	12/4/2015	12/4/2015
15120097-001B	Soil		0.336	0	0	30	89.286	12/4/2015	12/4/2015
15120100-001B	Soil		0.341	0	0	30	87.977	12/4/2015	12/4/2015
15120104-001B	Soil		0.302	0	0	30	99.338	12/4/2015	12/4/2015
15120104-003B	Soil		0.32	0	0	30	93.750	12/4/2015	12/4/2015
15120104-010B	Soil		0.328	0	0	30	91.463	12/4/2015	12/4/2015
15120104-019B	Soil		0.341	0	0	30	87.977	12/4/2015	12/4/2015
15120104-021B	Soil		0.334	0	0	30	89.820	12/4/2015	12/4/2015
15120132-001A	Soil		0.307	0	0	30	97.720	12/4/2015	12/4/2015
15120132-002A	Soil		0.375	0	0	30	80.000	12/4/2015	12/4/2015
15120134-001A	Soil		0.365	0	0	30	82.192	12/4/2015	12/4/2015
15120138-001A	Soil		0.329	0	0	30	91.185	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS2 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153160**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS2 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153161**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2686	0.021	0.2583	0.02465	94.5	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2782	0.021	0.2575	0.02465	98.4	75	125	0.2686	3.48	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/4/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120095-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120097-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120100-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/8/15			30	0	0	30	1.000	12/9/2015	12/9/2015
15120263-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120267-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120069-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-001A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMSO	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120197-001A			30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-002B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMS	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120156-005B	Aqueous		5	0	0	30	6.000	12/9/2015	12/9/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156396**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.00001	0.00020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156400**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0027	0.00020	0.0025	0	108	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0027	3.64	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW3 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156382**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW3 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156383**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0025	0.00020	0.0025	0	100	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88845

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS2 120415			1	0	0	50	50.000	12/4/2015	12/4/2015
TCNLCSS2 120415			1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001BMS	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001BMSD	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-002B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-003B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-004B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-005B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120100-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120104-019B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120104-021B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120097-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS2 120415	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155826**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.09911	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS2 120415	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155827**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.03	0.25	10	0.09911	99.3	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120095-001BMS	**2635-26-B01 (0-2)**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155829**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	11.39	0.32	12.8	0.2562	87	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120095-001BMSD	**2635-26-B01 (0-2)**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155830**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.32	12.8	0.2562	79	75	125	11.39	9.40	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT

Wet Chemistry

BatchID: R116678

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3153298	15120095-001B	SAMP	PH_S	R116678	1	12/04/2015
3153299	15120097-001B	SAMP	PH_S	R116678	1	12/04/2015
3153300	15120100-001B	SAMP	PH_S	R116678	1	12/04/2015
3153301	15120102-001B	SAMP	PH_S	R116678	1	12/04/2015
3153302	15120102-002B	SAMP	PH_S	R116678	1	12/04/2015
3153303	15120102-003B	SAMP	PH_S	R116678	1	12/04/2015
3153304	15120102-003BDUP	DUP	PH_S	R116678	1	12/04/2015
3153305	15120102-004B	SAMP	PH_S	R116678	1	12/04/2015
3153306	15120102-005B	SAMP	PH_S	R116678	1	12/04/2015
3153307	15120102-006B	SAMP	PH_S	R116678	1	12/04/2015
3153308	15120102-008B	SAMP	PH_S	R116678	1	12/04/2015
3153309	15120102-009B	SAMP	PH_S	R116678	1	12/04/2015
3153310	15120102-010B	SAMP	PH_S	R116678	1	12/04/2015
3153311	15120102-011B	SAMP	PH_S	R116678	1	12/04/2015
3153312	15120104-001B	SAMP	PH_S	R116678	1	12/04/2015
3153313	15120104-003B	SAMP	PH_S	R116678	1	12/04/2015
3153314	15120104-005B	SAMP	PH_S	R116678	1	12/04/2015
3153315	15120104-007B	SAMP	PH_S	R116678	1	12/04/2015
3153316	15120104-009B	SAMP	PH_S	R116678	1	12/04/2015
3153317	15120104-010B	SAMP	PH_S	R116678	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120102-003BDUP	**ZZZZZ**	**DUP**	**pH Units**	**SW9045C**	**12/4/2015**	**12/4/2015**	**PH_151204C**	**3153304**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	7.61	0	0	0	0	0	0	7.66	0.655	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120095
Project: 1009341.0002.01, IL 38, DuPage Co, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116650

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152453	PMMBLK2 12/3/15	MBLK	PMOIST	R116650	1	12/04/2015
3152454	PMLCS-S2 12/3/15	LCS	PMOIST	R116650	1	12/04/2015
3152455	PMLCS-W2 12/3/15	LCS	PMOIST	R116650	1	12/04/2015
3152456	15120079-014A	SAMP	PMOIST	R116650	1	12/04/2015
3152457	15120079-014A DUP	DUP	PMOIST	R116650	1	12/04/2015
3152458	15120079-013A	SAMP	PMOIST	R116650	1	12/04/2015
3152459	15120079-015B	SAMP	PMOIST	R116650	1	12/04/2015
3152460	15120079-016B	SAMP	PMOIST	R116650	1	12/04/2015
3152461	15120079-017B	SAMP	PMOIST	R116650	1	12/04/2015
3152462	15120079-018B	SAMP	PMOIST	R116650	1	12/04/2015
3152463	15120093-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152464	15120093-002B	SAMP	PMOIST	R116650	1	12/04/2015
3152465	15120093-003B	SAMP	PMOIST	R116650	1	12/04/2015
3152466	15120094-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152467	15120094-002B	SAMP	PMOIST	R116650	1	12/04/2015
3152468	15120094-003B	SAMP	PMOIST	R116650	1	12/04/2015
3152469	15120094-004B	SAMP	PMOIST	R116650	1	12/04/2015
3152470	15120094-005B	SAMP	PMOIST	R116650	1	12/04/2015
3152471	15120095-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152472	15120097-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152473	15120105-003A	SAMP	PMOIST	R116650	1	12/04/2015
3152474	15120105-004A	SAMP	PMOIST	R116650	1	12/04/2015
3152475	15120105-004ADUP	DUP	PMOIST	R116650	1	12/04/2015
3152476	15120105-005A	SAMP	PMOIST	R116650	1	12/04/2015
3152477	15120105-006A	SAMP	PMOIST	R116650	1	12/04/2015
3152478	15120105-006ADUP	DUP	PMOIST	R116650	1	12/04/2015
3152524	15120093-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152525	15120093-002B	SAMP	PSOLID	R116650	1	12/04/2015
3152526	15120093-003B	SAMP	PSOLID	R116650	1	12/04/2015
3152527	15120094-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152528	15120094-002B	SAMP	PSOLID	R116650	1	12/04/2015
3152529	15120094-003B	SAMP	PSOLID	R116650	1	12/04/2015
3152530	15120094-004B	SAMP	PSOLID	R116650	1	12/04/2015
3152531	15120094-005B	SAMP	PSOLID	R116650	1	12/04/2015
3152532	15120095-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152533	15120097-001B	SAMP	PSOLID	R116650	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK2 12/3/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152453**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S2 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152454**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.57	0.200	5	0	91.4	80	120	0	0		*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W2 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152455**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.82	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120079-014A DUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152457**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	19.5	0.200	0	0	0	0	0	20.29	3.97	20	*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-004ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152475**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	12.79	0.200	0	0	0	0	0	13.29	3.83	20	*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-006ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152478**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	12.79	0.200	0	0	0	0	0	12.55	1.89	20	*

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

Physical Site Location (address, incldluding number and street):
17 W 729 E. Roosevelt Road (ISGS #2635-27)

City: Oakbrook Terrace State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860033° (Decimal Degrees) Longitude: -87.976263° (-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 (Illinois Route 38)

Latitude: 41.860033° Longitude: -87.976263°

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 2635-27-B01 was sampled within the construction zone adjacent to ISGS #2635-27 (Strip Mall). Refer to PSI Report for ISGS #2635-27 (Strip Mall) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120097.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	ISGS #2635-27 (Strip Mall)		Comparison Criteria					
BORING	2635-27-B01		MACs			TACO		
SAMPLE	2635-27-B01 (0-2)							
MATRIX	Soil							
DEPTH (feet)	0-2		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
pH	8.0							
VOCs (mg/kg)								
Acetone	**0.073**		25	--	--	70,000	100,000	--
SVOCs (mg/kg)								
Anthracene	**0.079**		12,000	--	--	23,000	610,000	--
Benzo(a)anthracene	**0.50**		0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	**0.58**	†	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	**0.61**		0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	**0.47**		--	--	--	--	--	--
Benzo(k)fluoranthene	**0.53**		9	--	--	9	1,700	--
Chrysene	**0.65**		88	--	--	88	17,000	--
Dibenzo(a,h)anthracene	**0.19**	†	0.09	0.42	0.2	0.42	17	--
Fluoranthene	**1.3**		3,100	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	**0.42**		0.9	1.6	0.9	1.6	170	--
Phenanthrene	**0.57**		--	--	--	--	--	--
Pyrene	**1.0**		2,300	--	--	2,300	61,000	--
Inorganics (mg/kg)								
Aluminum	**16,000**		--	--	--	--	--	--
Arsenic	**11**		11.3	13	--	13	61	--
Barium	**150**		1,500	--	--	5,500	14,000	--
Beryllium	**0.75**		22	--	--	160	410	--
Calcium	**55,000**		--	--	--	--	--	--
Chromium	**26**	†	21	--	--	230	690	--
Cobalt	**9.8**		20	--	--	4,700	12,000	--
Copper	**31**		2,900	--	--	2,900	8,200	--
Iron	**31,000**	†m	15,000	15,900	--	--	--	--
Lead	**130**	†	107	--	--	400	700	--
Magnesium	**28,000**		325,000	--	--	--	730,000	--
Manganese	**470**		630	636	--	1,600	4,100	--
Mercury	**0.036**		0.89	--	--	10	0.1	--
Nickel	**27**		100	--	--	1,600	4,100	--
Potassium	**1,600**		--	--	--	--	--	--
Selenium	ND	U	1.3	--	--	390	1,000	--
Sodium	**530**		--	--	--	--	--	--
Thallium	ND	U	2.6	--	--	6.3	160	--
Vanadium	**31**		550	--	--	550	1,400	--
Zinc	**72**	**J**	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)								
Barium	**0.57**		--	--	--	--	--	2
Chromium	ND	U	--	--	--	--	--	0.1
Iron	ND	U	--	--	--	--	--	5
Lead	ND	U	--	--	--	--	--	0.0075
Manganese	**0.10**		--	--	--	--	--	0.15
SPLP Metals (Not Analyzed)								

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120097 Revision 0

RE: 1009341.0002.01, IL 38, DuPage Co., IL

Dear Dean Tiebout:

STAT Analysis received 1 sample for the referenced project on 12/3/2015 5:14:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

STAT Analysis Corporation

Date: December 15, 2015

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Work Order: 15120097 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120097-001A	2635-27-B01 (0-2)		12/3/2015 11:00:00 AM	12/3/2015
15120097-001B	2635-27-B01 (0-2)		12/3/2015 11:00:00 AM	12/3/2015

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Work Order: 15120097 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120097 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Lab ID: 15120097-001

Client Sample ID: 2635-27-B01 (0-2)
Collection Date: 12/3/2015 11:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/7/2015**		Analyst: **ART**
Acetone	0.073	0.071		mg/Kg-dry	1	12/8/2015
Benzene	ND	0.0047		mg/Kg-dry	1	12/8/2015
Bromodichloromethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
Bromoform	ND	0.0047		mg/Kg-dry	1	12/8/2015
Bromomethane	ND	0.0095		mg/Kg-dry	1	12/8/2015
2-Butanone	ND	0.071		mg/Kg-dry	1	12/8/2015
Carbon disulfide	ND	0.047		mg/Kg-dry	1	12/8/2015
Carbon tetrachloride	ND	0.0047		mg/Kg-dry	1	12/8/2015
Chlorobenzene	ND	0.0047		mg/Kg-dry	1	12/8/2015
Chloroethane	ND	0.0095		mg/Kg-dry	1	12/8/2015
Chloroform	ND	0.0047		mg/Kg-dry	1	12/8/2015
Chloromethane	ND	0.0095		mg/Kg-dry	1	12/8/2015
Dibromochloromethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,1-Dichloroethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,2-Dichloroethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,1-Dichloroethene	ND	0.0047		mg/Kg-dry	1	12/8/2015
cis-1,2-Dichloroethene	ND	0.0047		mg/Kg-dry	1	12/8/2015
trans-1,2-Dichloroethene	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,2-Dichloropropane	ND	0.0047		mg/Kg-dry	1	12/8/2015
cis-1,3-Dichloropropene	ND	0.0019		mg/Kg-dry	1	12/8/2015
trans-1,3-Dichloropropene	ND	0.0019		mg/Kg-dry	1	12/8/2015
Ethylbenzene	ND	0.0047		mg/Kg-dry	1	12/8/2015
2-Hexanone	ND	0.019		mg/Kg-dry	1	12/8/2015
4-Methyl-2-pentanone	ND	0.019		mg/Kg-dry	1	12/8/2015
Methylene chloride	ND	0.0095		mg/Kg-dry	1	12/8/2015
Methyl tert-butyl ether	ND	0.0047		mg/Kg-dry	1	12/8/2015
Styrene	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,1,2,2-Tetrachloroethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
Tetrachloroethene	ND	0.0047		mg/Kg-dry	1	12/8/2015
Toluene	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,1,1-Trichloroethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
1,1,2-Trichloroethane	ND	0.0047		mg/Kg-dry	1	12/8/2015
Trichloroethene	ND	0.0047		mg/Kg-dry	1	12/8/2015
Vinyl chloride	ND	0.0047		mg/Kg-dry	1	12/8/2015
Xylenes, Total	ND	0.014		mg/Kg-dry	1	12/8/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Acenaphthene	ND	0.040		mg/Kg-dry	1	12/8/2015
Acenaphthylene	ND	0.040		mg/Kg-dry	1	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120097 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Lab ID: 15120097-001

Client Sample ID: 2635-27-B01 (0-2)
Collection Date: 12/3/2015 11:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Aniline	ND	0.41		mg/Kg-dry	1	12/8/2015
Anthracene	0.079	0.040		mg/Kg-dry	1	12/8/2015
Benz(a)anthracene	0.50	0.040		mg/Kg-dry	1	12/8/2015
Benzidine	ND	0.40		mg/Kg-dry	1	12/8/2015
Benzo(a)pyrene	0.58	0.040		mg/Kg-dry	1	12/8/2015
Benzo(b)fluoranthene	0.61	0.040		mg/Kg-dry	1	12/8/2015
Benzo(g,h,i)perylene	0.47	0.040		mg/Kg-dry	1	12/8/2015
Benzo(k)fluoranthene	0.53	0.040		mg/Kg-dry	1	12/8/2015
Benzoic acid	ND	1.0		mg/Kg-dry	1	12/8/2015
Benzyl alcohol	ND	0.21		mg/Kg-dry	1	12/8/2015
Bis(2-chloroethoxy)methane	ND	0.21		mg/Kg-dry	1	12/8/2015
Bis(2-chloroethyl)ether	ND	0.21		mg/Kg-dry	1	12/8/2015
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg-dry	1	12/8/2015
4-Bromophenyl phenyl ether	ND	0.21		mg/Kg-dry	1	12/8/2015
Butyl benzyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
Carbazole	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Chloroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Chloro-3-methylphenol	ND	0.40		mg/Kg-dry	1	12/8/2015
2-Chloronaphthalene	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Chlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Chlorophenyl phenyl ether	ND	0.21		mg/Kg-dry	1	12/8/2015
Chrysene	0.65	0.040		mg/Kg-dry	1	12/8/2015
Dibenz(a,h)anthracene	0.19	0.040		mg/Kg-dry	1	12/8/2015
Dibenzofuran	ND	0.21		mg/Kg-dry	1	12/8/2015
1,2-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
1,3-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
1,4-Dichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
3,3´-Dichlorobenzidine	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4-Dichlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Diethyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4-Dimethylphenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Dimethyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
4,6-Dinitro-2-methylphenol	ND	0.40		mg/Kg-dry	1	12/8/2015
2,4-Dinitrophenol	ND	1.0		mg/Kg-dry	1	12/8/2015
2,4-Dinitrotoluene	ND	0.040		mg/Kg-dry	1	12/8/2015
2,6-Dinitrotoluene	ND	0.040		mg/Kg-dry	1	12/8/2015
Di-n-butyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015
Di-n-octyl phthalate	ND	0.21		mg/Kg-dry	1	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120097 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Lab ID: 15120097-001

Client Sample ID: 2635-27-B01 (0-2)
Collection Date: 12/3/2015 11:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/7/2015**		Analyst: **DM**
Fluoranthene	1.3	0.040		mg/Kg-dry	1	12/8/2015
Fluorene	ND	0.040		mg/Kg-dry	1	12/8/2015
Hexachlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
Hexachlorobutadiene	ND	0.21		mg/Kg-dry	1	12/8/2015
Hexachlorocyclopentadiene	ND	0.21		mg/Kg-dry	1	12/8/2015
Hexachloroethane	ND	0.21		mg/Kg-dry	1	12/8/2015
Indeno(1,2,3-cd)pyrene	0.42	0.040		mg/Kg-dry	1	12/8/2015
Isophorone	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Methylnaphthalene	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Methylphenol	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Methylphenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Naphthalene	ND	0.040		mg/Kg-dry	1	12/8/2015
2-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
3-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Nitroaniline	ND	0.21		mg/Kg-dry	1	12/8/2015
2-Nitrophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
4-Nitrophenol	ND	0.40		mg/Kg-dry	1	12/8/2015
Nitrobenzene	ND	0.040		mg/Kg-dry	1	12/8/2015
N-Nitrosodi-n-propylamine	ND	0.040		mg/Kg-dry	1	12/8/2015
N-Nitrosodimethylamine	ND	0.21		mg/Kg-dry	1	12/8/2015
N-Nitrosodiphenylamine	ND	0.21		mg/Kg-dry	1	12/8/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.21		mg/Kg-dry	1	12/8/2015
Pentachlorophenol	ND	0.082		mg/Kg-dry	1	12/8/2015
Phenanthrene	0.57	0.040		mg/Kg-dry	1	12/8/2015
Phenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Pyrene	1.0	0.040		mg/Kg-dry	1	12/8/2015
Pyridine	ND	0.82		mg/Kg-dry	1	12/8/2015
1,2,4-Trichlorobenzene	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4,5-Trichlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
2,4,6-Trichlorophenol	ND	0.21		mg/Kg-dry	1	12/8/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/7/2015**		Analyst: **JG**
Aluminum	16000	230		mg/Kg-dry	100	12/7/2015
Antimony	ND	2.3		mg/Kg-dry	10	12/8/2015
Arsenic	11	1.1		mg/Kg-dry	10	12/8/2015
Barium	150	1.1		mg/Kg-dry	10	12/8/2015
Beryllium	0.75	0.57		mg/Kg-dry	10	12/8/2015
Cadmium	ND	0.57		mg/Kg-dry	10	12/8/2015
Calcium	55000	68		mg/Kg-dry	10	12/8/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120097 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Lab ID: 15120097-001

Client Sample ID: 2635-27-B01 (0-2)
Collection Date: 12/3/2015 11:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/7/2015**		Analyst: **JG**
Chromium	26	1.1		mg/Kg-dry	10	12/8/2015
Cobalt	9.8	1.1		mg/Kg-dry	10	12/8/2015
Copper	31	2.8		mg/Kg-dry	10	12/8/2015
Iron	31000	340		mg/Kg-dry	100	12/7/2015
Lead	130	0.57		mg/Kg-dry	10	12/8/2015
Magnesium	28000	34		mg/Kg-dry	10	12/8/2015
Manganese	470	1.1		mg/Kg-dry	10	12/8/2015
Nickel	27	1.1		mg/Kg-dry	10	12/8/2015
Potassium	1600	34		mg/Kg-dry	10	12/8/2015
Selenium	ND	1.1		mg/Kg-dry	10	12/8/2015
Silver	ND	1.1		mg/Kg-dry	10	12/8/2015
Sodium	530	68		mg/Kg-dry	10	12/8/2015
Thallium	ND	1.1		mg/Kg-dry	10	12/8/2015
Vanadium	31	1.1		mg/Kg-dry	10	12/8/2015
Zinc	72	5.7		mg/Kg-dry	10	12/8/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/7/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.57	0.050		mg/L	5	12/8/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	0.37	0.10	*	mg/L	5	12/8/2015
Cadmium	ND	0.0050		mg/L	5	12/8/2015
Chromium	ND	0.010		mg/L	5	12/8/2015
Cobalt	ND	0.010		mg/L	5	12/8/2015
Iron	ND	0.25		mg/L	5	12/8/2015
Lead	ND	0.0050		mg/L	5	12/8/2015
Manganese	0.10	0.010		mg/L	5	12/8/2015
Nickel	ND	0.020		mg/L	5	12/8/2015
Selenium	ND	0.010		mg/L	5	12/8/2015
Silver	ND	0.010		mg/L	5	12/8/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/8/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/4/2015**		Analyst: **LB**
Mercury	0.036	0.022		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120097 Revision 0
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Lab ID: 15120097-001

Client Sample ID: 2635-27-B01 (0-2)
Collection Date: 12/3/2015 11:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Cyanide, Total	**SW9012A**			Prep Date: **12/4/2015**		Analyst: **YZ**
Cyanide	ND	0.31		mg/Kg-dry	1	12/9/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/4/2015**		Analyst: **PBG**
pH	8.0			pH Units	1	12/4/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	18.5	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	81.5	0.20	*	wt%	1	12/4/2015

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e-mail address: STATinfo@STATAnalysis.com ***AIHA, NVLAP and NELAP accredited***

CHAIN OF CUSTODY RECORD

N°: 860062 **Page : ____ of ____**

Company: ESE
Project Number: 1009341.0002.01 Client Tracking No.:
Project Name: IL 38
Project Location: DuPage Co., IL
Sampler(s): J Shyft
Report To: Tiebout Phone: 312-578-9293
Cooper Fax: 312-578-9345
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail: dtiebout@ene.com

P.O. No.:
Quote No.:

Turn Around: 10 day
Results Needed: / / am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	Total TAL Metals	TCLP/SPLP Metals	pH	% Solids	Remarks	Lab No.:
2635-27-B01 (0-2)	12/3/15	1100	S		X	HF	4	X	X	X	X	X	X		001

Relinquished by: (Signature) Date/Time: 12/3/15 1255
Received by: (Signature) Date/Time: 12/3/15 12:58
Relinquished by: (Signature) Date/Time: 12/3/15 17:10
Received by: (Signature) Martin Kwan Date/Time: 12/3/15 17:14
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments:

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120097

Received on Ice: Yes ☑ No ☐
Temperature: 4.2 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E

Date and Time Received: 12/3/2015 5:14:00 PM

Work Order Number 15120097

Received by: MGK

Checklist completed by: Martin Kuenn 12/3/15
Signature Date

Reviewed by: MGK 12/4/15
Initials Date

Matrix: Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature 4.2 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120815-3	103	97.9	108	105				
VLCS120815-3	106	100	113	107				
VLCSD120815-3	105	101	112	103				
15120097-001A	78.0	96.3	128	127				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3155350	BFB120815-3	TUNE	BFB	R116763	1	12/08/2015 08:35
3155351	VSTD050r	CCV	VOC_ENCORE+	R116763	1	12/08/2015 09:34
3155352	VBLK120815-3	MBLK	VOC_ENCORE+	R116763	1	12/08/2015 10:10
3155353	VLCS120815-3	LCS	VOC_ENCORE+	R116763	1	12/08/2015 10:46
3155354	VLCSD120815-3	LCSD	VOC_ENCORE+	R116763	1	12/08/2015 11:22
3155355	15120109-004A	SAMP	BTEX+_5035	88818	1	12/08/2015 11:59
3155356	15120109-001A	SAMP	VOC_5035	88817	1	12/08/2015 12:36
3155357	15120109-003A	SAMP	VOC_5035	88817	1	12/08/2015 13:12
3155358	15120093-001A	SAMP	VOC_5035	88870	1	12/08/2015 13:49
3155359	15120093-002A	SAMP	VOC_5035	88870	1	12/08/2015 14:26
3155360	15120093-003A	SAMP	VOC_5035	88870	1	12/08/2015 15:02
3155361	15120095-001A	SAMP	VOC_5035	88870	1	12/08/2015 15:39
3155362	15120097-001A	SAMP	VOC_5035	88870	1	12/08/2015 16:16
3155383	15120100-001A	SAMP	VOC_5035	88870	1	12/08/2015 16:52
3155385	15120106-001A	SAMP	VOC_5035	88843	1	12/08/2015 17:28
3155414	15120107-001A	SAMP	VOC_5035	88843	1	12/08/2015 18:04
3155420	15120150-001A	SAMP	VOC_5035	88843	1	12/08/2015 18:41
3155765	15120150-001A	SAMP	VOC_5035+	88843	1	12/08/2015 18:41
3155430	15120145-001A	RA	VOC_5035	88843	1	12/08/2015 19:17

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120815-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155352**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116763

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120815-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155352**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethylbenzene	0.0001	0.0050									J
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120815-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155353**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.0515	0.0050	0.05	0	103	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04802	0.0050	0.05	0	96	70	130	0	0		
1,1,2-Trichloroethane	0.05045	0.0050	0.05	0	101	70	130	0	0		
1,1-Dichloroethane	0.04897	0.0050	0.05	0	97.9	70	130	0	0		
1,1-Dichloroethene	0.05095	0.0050	0.05	0	102	70	130	0	0		
1,2-Dichloroethane	0.05138	0.0050	0.05	0	103	70	130	0	0		
1,2-Dichloropropane	0.0491	0.0050	0.05	0	98.2	70	130	0	0		
2-Butanone	0.1039	0.075	0.1	0	104	70	130	0	0		
2-Hexanone	0.09969	0.020	0.1	0	99.7	70	130	0	0		
4-Methyl-2-pentanone	0.1027	0.020	0.1	0	103	70	130	0	0		
Acetone	0.09746	0.075	0.1	0	97.5	50	150	0	0		
Benzene	0.04819	0.0050	0.05	0	96.4	70	130	0	0		
Bromodichloromethane	0.05318	0.0050	0.05	0	106	70	130	0	0		
Bromoform	0.05592	0.0050	0.05	0	112	70	130	0	0		
Bromomethane	0.0499	0.010	0.05	0	99.8	70	130	0	0		
Carbon disulfide	0.1062	0.050	0.1	0	106	70	130	0	0		
Carbon tetrachloride	0.0531	0.0050	0.05	0	106	70	130	0	0		
Chlorobenzene	0.04983	0.0050	0.05	0	99.7	70	130	0	0		
Chloroethane	0.05535	0.010	0.05	0	111	70	130	0	0		
Chloroform	0.05294	0.0050	0.05	0	106	70	130	0	0		
Chloromethane	0.04846	0.010	0.05	0	96.9	70	130	0	0		
cis-1,2-Dichloroethene	0.05058	0.0050	0.05	0	101	70	130	0	0		
cis-1,3-Dichloropropene	0.05016	0.0020	0.05	0	100	70	130	0	0		
Dibromochloromethane	0.05432	0.0050	0.05	0	109	70	130	0	0		
Ethylbenzene	0.04951	0.0050	0.05	0.0001	98.8	70	130	0	0		
Methyl tert-butyl ether	0.05678	0.0050	0.05	0	114	70	130	0	0		
Methylene chloride	0.04788	0.010	0.05	0	95.8	70	130	0	0		
Styrene	0.05244	0.0050	0.05	0	105	70	130	0	0		
Tetrachloroethene	0.05102	0.0050	0.05	0	102	70	130	0	0		
Toluene	0.05015	0.0050	0.05	0	100	70	130	0	0		
trans-1,2-Dichloroethene	0.0566	0.0050	0.05	0	113	70	130	0	0		
trans-1,3-Dichloropropene	0.05203	0.0020	0.05	0	104	70	130	0	0		
Trichloroethene	0.05095	0.0050	0.05	0	102	70	130	0	0		
Vinyl chloride	0.05162	0.0050	0.05	0	103	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116763

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120815-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155353**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Xylenes, Total	0.1524	0.015	0.15	0	102	70	130	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120815-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/8/2015**	**VOA-3_151208A**	**3155354**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.05084	0.0050	0.05	0	102	70	130	0.0515	1.29	20	
1,1,2,2-Tetrachloroethane	0.04709	0.0050	0.05	0	94.2	70	130	0.04802	1.96	20	
1,1,2-Trichloroethane	0.04944	0.0050	0.05	0	98.9	70	130	0.05045	2.02	20	
1,1-Dichloroethane	0.04734	0.0050	0.05	0	94.7	70	130	0.04897	3.38	20	
1,1-Dichloroethene	0.04965	0.0050	0.05	0	99.3	70	130	0.05095	2.58	20	
1,2-Dichloroethane	0.04904	0.0050	0.05	0	98.1	70	130	0.05138	4.66	20	
1,2-Dichloropropane	0.048	0.0050	0.05	0	96	70	130	0.0491	2.27	20	
2-Butanone	0.1009	0.075	0.1	0	101	70	130	0.1039	2.92	20	
2-Hexanone	0.09829	0.020	0.1	0	98.3	70	130	0.09969	1.41	20	
4-Methyl-2-pentanone	0.09973	0.020	0.1	0	99.7	70	130	0.1027	2.90	20	
Acetone	0.09122	0.075	0.1	0	91.2	50	150	0.09746	6.61	20	
Benzene	0.04698	0.0050	0.05	0	94	70	130	0.04819	2.54	20	
Bromodichloromethane	0.05105	0.0050	0.05	0	102	70	130	0.05318	4.09	20	
Bromoform	0.05527	0.0050	0.05	0	111	70	130	0.05592	1.17	20	
Bromomethane	0.04824	0.010	0.05	0	96.5	70	130	0.0499	3.38	20	
Carbon disulfide	0.1024	0.050	0.1	0	102	70	130	0.1062	3.71	20	
Carbon tetrachloride	0.05009	0.0050	0.05	0	100	70	130	0.0531	5.83	20	
Chlorobenzene	0.04766	0.0050	0.05	0	95.3	70	130	0.04983	4.45	20	
Chloroethane	0.0506	0.010	0.05	0	101	70	130	0.05535	8.97	20	
Chloroform	0.05136	0.0050	0.05	0	103	70	130	0.05294	3.03	20	
Chloromethane	0.04552	0.010	0.05	0	91	70	130	0.04846	6.26	20	
cis-1,2-Dichloroethene	0.04786	0.0050	0.05	0	95.7	70	130	0.05058	5.53	20	
cis-1,3-Dichloropropene	0.0489	0.0020	0.05	0	97.8	70	130	0.05016	2.54	20	
Dibromochloromethane	0.05335	0.0050	0.05	0	107	70	130	0.05432	1.80	20	
Ethylbenzene	0.04694	0.0050	0.05	0.0001	93.7	70	130	0.04951	5.33	20	
Methyl tert-butyl ether	0.05581	0.0050	0.05	0	112	70	130	0.05678	1.72	20	
Methylene chloride	0.04724	0.010	0.05	0	94.5	70	130	0.04788	1.35	20	
Styrene	0.05012	0.0050	0.05	0	100	70	130	0.05244	4.52	20	
Tetrachloroethene	0.04787	0.0050	0.05	0	95.7	70	130	0.05102	6.37	20	
Toluene	0.04845	0.0050	0.05	0	96.9	70	130	0.05015	3.45	20	
trans-1,2-Dichloroethene	0.05496	0.0050	0.05	0	110	70	130	0.0566	2.94	20	
trans-1,3-Dichloropropene	0.05056	0.0020	0.05	0	101	70	130	0.05203	2.87	20	
Trichloroethene	0.04827	0.0050	0.05	0	96.5	70	130	0.05095	5.40	20	
Vinyl chloride	0.04901	0.0050	0.05	0	98	70	130	0.05162	5.19	20	
Xylenes, Total	0.1441	0.015	0.15	0	96.1	70	130	0.1524	5.60	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
MB-88850-SVOC	67.2	67.1	67.4	84.9	66.3	71.0	75.0	82.3
LCS-88850-SVOC	75.7	77.2	82.4	93.1	71.7	77.5	81.8	79.3
15120178-001AMS	52.7	51.9	58.5	90.7	49.1	58.1	66.7	81.6
15120178-001AMSD	53.4	52.4	57.9	88.3	48.8	57.8	65.8	77.9
15120097-001B	58.4	54.8	57.2	82.9	54.1	64.7	66.1	77.5

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88850-SVOC			0.03	0	0	1	33.333	12/7/2015	12/7/2015
LCS-88850-SVOC			0.03	0	0	1	33.333	12/7/2015	12/7/2015
15120093-001B	Soil		0.03046	0	0	1	32.830	12/7/2015	12/7/2015
15120093-002B	Soil		0.03034	0	0	1	32.960	12/7/2015	12/7/2015
15120093-003B	Soil		0.03031	0	0	1	32.992	12/7/2015	12/7/2015
15120094-001B	Soil		0.03047	0	0	1	32.819	12/7/2015	12/7/2015
15120094-002B	Soil		0.0301	0	0	1	33.223	12/7/2015	12/7/2015
15120094-003B	Soil		0.03009	0	0	1	33.234	12/7/2015	12/7/2015
15120094-004B	Soil		0.03002	0	0	1	33.311	12/7/2015	12/7/2015
15120094-005B	Soil		0.03016	0	0	1	33.156	12/7/2015	12/7/2015
15120095-001B	Soil		0.03021	0	0	1	33.102	12/7/2015	12/7/2015
15120097-001B	Soil		0.03007	0	0	1	33.256	12/7/2015	12/7/2015
15120100-001B	Soil		0.03003	0	0	1	33.300	12/7/2015	12/7/2015
15120145-001B	Soil		0.03029	0	0	1	33.014	12/7/2015	12/7/2015
15120150-001B	Soil		0.03035	0	0	1	32.949	12/7/2015	12/7/2015
15120152-001B	Soil		0.03003	0	0	1	33.300	12/7/2015	12/7/2015
15120152-002B	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015
15120156-001B	Soil		0.03036	0	0	1	32.938	12/7/2015	12/7/2015
15120156-002B	Soil		0.03047	0	0	1	32.819	12/7/2015	12/7/2015
15120156-003B	Soil		0.03021	0	0	1	33.102	12/7/2015	12/7/2015
15120156-004B	Soil		0.03024	0	0	1	33.069	12/7/2015	12/7/2015
15120178-001A	Soil		0.03022	0	0	1	33.091	12/7/2015	12/7/2015
15120178-001AMS	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015
15120178-001AMSD	Soil		0.03025	0	0	1	33.058	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88850

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88850-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154655**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88850-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154656**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.395	0.033	1.667	0	83.7	37	134	0	0		
4-Chloro-3-methylphenol	2.815	0.33	3.333	0	84.4	29	134	0	0		
2-Chlorophenol	2.614	0.17	3.333	0	78.4	29	105	0	0		
1,4-Dichlorobenzene	1.331	0.17	1.667	0	79.8	26	111	0	0		
2,4-Dinitrotoluene	1.501	0.033	1.667	0	90	46	125	0	0		
4-Nitrophenol	3.212	0.33	3.333	0	96.4	12	146	0	0		
N-Nitrosodi-n-propylamine	1.359	0.033	1.667	0	81.5	29	109	0	0		
Pentachlorophenol	2.983	0.067	3.333	0	89.5	10	192	0	0		
Phenol	2.57	0.17	3.333	0	77.1	27	104	0	0		
Pyrene	1.34	0.033	1.667	0	80.4	42	148	0	0		
1,2,4-Trichlorobenzene	1.371	0.17	1.667	0	82.3	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120178-001AMS	**ZZZZZ**	**MS**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154657**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.569	0.033	1.653	0.1271	87.2	24	139	0	0		
4-Chloro-3-methylphenol	2.514	0.33	3.305	0	76	28	121	0	0		
2-Chlorophenol	1.827	0.17	3.305	0	55.3	21	102	0	0		
1,4-Dichlorobenzene	0.8846	0.17	1.653	0	53.5	27	95	0	0		
2,4-Dinitrotoluene	1.435	0.033	1.653	0	86.8	32	127	0	0		
4-Nitrophenol	2.729	0.33	3.305	0	82.6	10	156	0	0		
N-Nitrosodi-n-propylamine	0.9521	0.033	1.653	0	57.6	16	122	0	0		
Pentachlorophenol	2.693	0.066	3.305	0	81.5	10	204	0	0		
Phenol	1.909	0.17	3.305	0	57.8	20	103	0	0		
Pyrene	6.25	0.033	1.653	2.389	234	10	184	0	0		SE
1,2,4-Trichlorobenzene	0.9769	0.17	1.653	0	59.1	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120178-001AMSD	**ZZZZZ**	**MSD**	**mg/Kg**	**SW8270C**	**12/7/2015**	**12/7/2015**	**SVOC-7_151207B**	**3154658**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.252	0.033	1.653	0.1271	68	24	139	1.569	22.5	57	
4-Chloro-3-methylphenol	2.433	0.33	3.305	0	73.6	28	121	2.514	3.25	88	
2-Chlorophenol	1.806	0.17	3.305	0	54.6	21	102	1.827	1.16	49	
1,4-Dichlorobenzene	0.874	0.17	1.653	0	52.9	27	95	0.8846	1.20	43	
2,4-Dinitrotoluene	1.362	0.033	1.653	0	82.4	32	127	1.435	5.27	37	
4-Nitrophenol	2.699	0.33	3.305	0	81.6	10	156	2.729	1.11	56	
N-Nitrosodi-n-propylamine	0.9583	0.033	1.653	0	58	16	122	0.9521	0.658	47	
Pentachlorophenol	2.721	0.066	3.305	0	82.3	10	204	2.693	1.04	47	
Phenol	1.852	0.17	3.305	0	56	20	103	1.909	3.04	66	
Pyrene	2.701	0.033	1.653	2.389	18.9	10	184	6.25	79.3	51	R
1,2,4-Trichlorobenzene	0.9755	0.17	1.653	0	59	55	106	0.9769	0.135	23	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88855

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS3 12/7/15			1	0	0	50	50.000	12/7/2015	12/7/2015
ILCSS3 12/7/15			1	0	0	50	50.000	12/7/2015	12/7/2015
15120094-001B	Soil		1.027	0	0	50	48.685	12/7/2015	12/7/2015
15120094-002B	Soil		1.09	0	0	50	45.872	12/7/2015	12/7/2015
15120094-003B	Soil		1.036	0	0	50	48.263	12/7/2015	12/7/2015
15120094-004B	Soil		1.065	0	0	50	46.948	12/7/2015	12/7/2015
15120094-005B	Soil		1.056	0	0	50	47.348	12/7/2015	12/7/2015
15120093-001B	Soil		1.083	0	0	50	46.168	12/7/2015	12/7/2015
15120093-002B	Soil		1.069	0	0	50	46.773	12/7/2015	12/7/2015
15120093-003B	Soil		1.046	0	0	50	47.801	12/7/2015	12/7/2015
15120095-001B	Soil		1.048	0	0	50	47.710	12/7/2015	12/7/2015
15120097-001B	Soil		1.08	0	0	50	46.296	12/7/2015	12/7/2015
15120100-001B	Soil		1.085	0	0	50	46.083	12/7/2015	12/7/2015
15120109-001B	Soil		1.088	0	0	50	45.956	12/7/2015	12/7/2015
15120109-002B	Soil		1.094	0	0	50	45.704	12/7/2015	12/7/2015
15120109-003B	Soil		1.048	0	0	50	47.710	12/7/2015	12/7/2015
15120109-004B	Soil		1.012	0	0	50	49.407	12/7/2015	12/7/2015
15120109-004BMS	Soil		1.021	0	0	50	48.972	12/7/2015	12/7/2015
15120109-004BMSD	Soil		1.014	0	0	50	49.310	12/7/2015	12/7/2015
15120152-001B	Soil		1.087	0	0	50	45.998	12/7/2015	12/7/2015
15120152-002B	Soil		1.02	0	0	50	49.020	12/7/2015	12/7/2015
15120197-001A	Soil		1.037	0	0	50	48.216	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS3 12/7/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154398**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	0.2325	1.0									J
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	0.086	0.50									J
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.086	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	ND	0.25									
Sodium	ND	30									
Thallium	ND	0.50									
Vanadium	ND	0.50									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS3 12/7/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154398**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS3 12/7/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154399**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	25.02	10	25	0	100	80	120	0	0		
Arsenic	24.2	0.50	25	0	96.8	80	120	0	0		
Barium	27.04	0.50	25	0	108	80	120	0	0		
Beryllium	23.7	0.25	25	0	94.8	80	120	0	0		
Cadmium	25.4	0.25	25	0	102	80	120	0	0		
Calcium	99.5	30	100	0	99.5	80	120	0	0		
Chromium	24.72	0.50	25	0.086	98.5	80	120	0	0		
Cobalt	24.96	0.50	25	0	99.8	80	120	0	0		
Copper	24.24	1.2	25	0	96.9	80	120	0	0		
Iron	102.5	15	100	0	103	80	120	0	0		
Lead	26	0.25	25	0.086	104	80	120	0	0		
Magnesium	96.6	15	100	0	96.6	80	120	0	0		
Manganese	24.84	0.50	25	0	99.4	80	120	0	0		
Nickel	24.24	0.50	25	0	97	80	120	0	0		
Potassium	100.8	15	100	0	101	80	120	0	0		
Selenium	23.28	0.25	25	0	93.1	80	120	0	0		
Silver	11	0.25	10	0	110	80	120	0	0		
Sodium	94.75	30	100	0	94.8	80	120	0	0		
Thallium	25.36	0.50	25	0	101	80	120	0	0		
Vanadium	23.36	0.50	25	0	93.4	80	120	0	0		
Zinc	19.96	2.5	25	0	79.8	80	120	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS3 12/7/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154819**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	20.02	1.0	12.5	0.2325	158	80	120	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	11920	240	29.86	11620	997	75	125	0	0		S
Iron	39900	360	119.4	36690	2680	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154439**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	45.79	1.2	29.86	14.47	105	75	125	0	0		
Barium	81.52	1.2	29.86	79.96	5.24	75	125	0	0		S
Beryllium	29.04	0.60	29.86	0.5435	95.4	75	125	0	0		
Cadmium	30.33	0.60	29.86	0.2494	101	75	125	0	0		
Calcium	49180	72	119.4	48330	708	75	125	0	0		S
Chromium	45.42	1.2	29.86	17.49	93.5	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154439**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	44.16	1.2	29.86	18.51	85.9	75	125	0	0		
Copper	51.76	3.0	29.86	24.7	90.6	75	125	0	0		
Lead	48.27	0.60	29.86	16.3	107	75	125	0	0		
Magnesium	20340	36	119.4	20350	-10.2	75	125	0	0		S
Manganese	411.3	1.2	29.86	425.6	-47.8	75	125	0	0		S
Nickel	60.56	1.2	29.86	36.46	80.7	75	125	0	0		
Potassium	2404	36	119.4	2237	139	75	125	0	0		S
Selenium	28.95	0.60	29.86	1.443	92.1	75	125	0	0		
Silver	12.08	0.60	11.94	0.08194	100	75	125	0	0		
Sodium	158.3	72	119.4	55.46	86.1	75	125	0	0		
Thallium	29.7	1.2	29.86	0.6658	97.2	75	125	0	0		
Vanadium	46.78	1.2	29.86	19.47	91.4	75	125	0	0		
Zinc	66.83	6.0	29.86	43.89	76.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154824**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	6.348	2.4	14.93	1.889	29.9	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154402**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	11540	240	30.07	11620	-276	75	125	11920	3.25	20	S
Iron	40150	360	120.3	36690	2870	75	125	39900	0.628	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/7/2015**	**ICPMS_151207A**	**3154442**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	44.43	1.2	30.07	14.47	99.6	75	125	45.79	3.01	20	
Barium	92.91	1.2	30.07	79.96	43.1	75	125	81.52	13.1	20	S
Beryllium	29.01	0.60	30.07	0.5435	94.7	75	125	29.04	0.0967	20	
Cadmium	30.93	0.60	30.07	0.2494	102	75	125	30.33	1.96	20	
Calcium	47100	72	120.3	48330	-1020	75	125	49180	4.32	20	S
Chromium	45.98	1.2	30.07	17.49	94.8	75	125	45.42	1.24	20	
Cobalt	44.05	1.2	30.07	18.51	84.9	75	125	44.16	0.263	20	
Copper	53.04	3.0	30.07	24.7	94.3	75	125	51.76	2.44	20	
Lead	47.4	0.60	30.07	16.3	103	75	125	48.27	1.83	20	
Magnesium	19850	36	120.3	20350	-418	75	125	20340	2.44	20	S
Manganese	421.4	1.2	30.07	425.6	-13.8	75	125	411.3	2.43	20	S
Nickel	62.36	1.2	30.07	36.46	86.1	75	125	60.56	2.93	20	
Potassium	2382	36	120.3	2237	120	75	125	2404	0.915	20	
Selenium	28	0.60	30.07	1.443	88.3	75	125	28.95	3.33	20	
Silver	12.15	0.60	12.03	0.08194	100	75	125	12.08	0.540	20	
Sodium	154.7	72	120.3	55.46	82.5	75	125	158.3	2.30	20	
Thallium	29.46	1.2	30.07	0.6658	95.8	75	125	29.7	0.811	20	
Vanadium	47.66	1.2	30.07	19.47	93.8	75	125	46.78	1.87	20	
Zinc	67.53	6.0	30.07	43.89	78.6	75	125	66.83	1.04	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88855

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120109-004BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS_151208A**	**3154825**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	5.909	2.4	15.03	1.889	26.7	75	125	6.348	7.16	20	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88869

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
ILCSW3 12/7/15			50	0	0	50	1.000	12/7/2015	12/7/2015
IMBTA1 12/4/15			50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120093-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMS	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-002BMSD	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-003B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-004B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120094-005B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120095-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120097-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015
15120100-001B	Soil		50	0	0	50	1.000	12/7/2015	12/7/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155493**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	ND	0.015									
Barium	0.02875	0.050									J
Beryllium	ND	0.0050									
Boron	0.5274	0.20									*
Cadmium	ND	0.0050									
Chromium	0.003406	0.010									J
Cobalt	0.000459	0.010									J
Iron	ND	0.25									
Lead	0.001541	0.0050									J
Manganese	0.00106	0.010									J
Nickel	0.002965	0.020									J
Selenium	ND	0.010									
Silver	ND	0.010									
Thallium	0.001742	0.0050									J
Zinc	0.01217	0.050									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156298**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	0.8081	0.050	0.5	0.2401	114	75	125	0	0		
Boron	0.8592	0.20	0.5	0.3525	101	75	125	0	0		*
Cadmium	0.4302	0.0050	0.5	0	86	75	125	0	0		
Chromium	0.4781	0.010	0.5	0.00094	95.4	75	125	0	0		
Cobalt	0.6679	0.010	0.5	0.2015	93.3	75	125	0	0		
Iron	5.87	0.25	2	3.943	96.4	75	125	0	0		
Lead	0.5383	0.0050	0.5	0.01087	105	75	125	0	0		
Manganese	2.941	0.010	0.5	2.487	90.8	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156298**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nickel	0.7782	0.020	0.5	0.378	80	75	125	0	0		
Selenium	0.4658	0.010	0.5	0.02	89.2	75	125	0	0		
Silver	0.1689	0.010	0.2	0.00065	84.1	75	125	0	0		
Zinc	0.3715	0.050	0.5	0.02575	69.2	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158971**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3312	0.0060	0.25	0	132	75	125	0	0		S
Beryllium	0.5386	0.0020	0.5	0	108	75	125	0	0		
Thallium	0.5698	0.0020	0.5	0.002182	114	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156299**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	0.7951	0.050	0.5	0.2401	111	75	125	0.8081	1.62	20	
Boron	0.8348	0.20	0.5	0.3525	96.5	75	125	0.8592	2.88	20	*
Cadmium	0.4272	0.0050	0.5	0	85.4	75	125	0.4302	0.700	20	
Chromium	0.4827	0.010	0.5	0.00094	96.4	75	125	0.4781	0.958	20	
Cobalt	0.6611	0.010	0.5	0.2015	91.9	75	125	0.6679	1.02	20	
Iron	5.62	0.25	2	3.943	83.8	75	125	5.87	4.35	20	
Lead	0.534	0.0050	0.5	0.01087	105	75	125	0.5383	0.802	20	
Manganese	2.838	0.010	0.5	2.487	70.2	75	125	2.941	3.56	20	S
Nickel	0.7738	0.020	0.5	0.378	79.2	75	125	0.7782	0.567	20	
Selenium	0.4684	0.010	0.5	0.02	89.7	75	125	0.4658	0.557	20	
Silver	0.1688	0.010	0.2	0.00065	84.1	75	125	0.1689	0.0592	20	
Zinc	0.3684	0.050	0.5	0.02575	68.5	75	125	0.3715	0.838	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120094-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/7/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158972**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3046	0.0060	0.25	0	122	75	125	0.3312	8.38	20	
Beryllium	0.4982	0.0020	0.5	0	99.6	75	125	0.5386	7.79	20	
Thallium	0.5197	0.0020	0.5	0.002182	104	75	125	0.5698	9.18	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156295**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00103	0.0060									J
Barium	ND	0.0040									
Beryllium	ND	0.0020									
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	ND	0.10									
Lead	0.00081	0.0020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/7/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156295**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.0017	0.0040									J
Silver	0.00022	0.0040									J
Thallium	0.00043	0.0020									J
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/8/2015**	**ICPMS-3_151208B**	**3155492**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.2656	0.0060	0.25	0.0009908	106	80	120	0	0		
Barium	0.4833	0.0040	0.5	0	96.7	80	120	0	0		
Beryllium	0.4654	0.0020	0.5	0	93.1	80	120	0	0		
Boron	0.476	0.080	0.5	0	95.2	80	120	0	0		
Cadmium	0.4918	0.0020	0.5	0	98.4	80	120	0	0		
Lead	0.4945	0.0020	0.5	0.001048	98.7	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/7/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/7/2015**	**12/9/2015**	**ICPMS_151208B**	**3156296**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium	0.4722	0.0040	0.5	0	94.4	80	120	0	0		
Cobalt	0.4685	0.0040	0.5	0	93.7	80	120	0	0		
Iron	1.888	0.10	2	0	94.4	80	120	0	0		
Manganese	0.4606	0.0040	0.5	0	92.1	80	120	0	0		
Nickel	0.4353	0.0040	0.5	0	87.1	80	120	0	0		
Selenium	0.4573	0.0040	0.5	0.0017	91.1	80	120	0	0		
Silver	0.1883	0.0040	0.2	0.00022	94	80	120	0	0		
Thallium	0.4691	0.0020	0.5	0.00043	93.7	80	120	0	0		
Zinc	0.4127	0.020	0.5	0	82.5	80	120	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88824

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS2 12/4/15			0.3	0	0	30	100.000	12/4/2015	12/4/2015
HGLCSS2 12/4/15			0.3	0	0	30	100.000	12/4/2015	12/4/2015
15120093-001B	Soil		0.342	0	0	30	87.719	12/4/2015	12/4/2015
15120093-002B	Soil		0.329	0	0	30	91.185	12/4/2015	12/4/2015
15120093-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120093-003BMS	Soil		0.342	0	0	30	87.719	12/4/2015	12/4/2015
15120093-003BMSD	Soil		0.343	0	0	30	87.464	12/4/2015	12/4/2015
15120094-001B	Soil		0.333	0	0	30	90.090	12/4/2015	12/4/2015
15120094-002B	Soil		0.343	0	0	30	87.464	12/4/2015	12/4/2015
15120094-003B	Soil		0.348	0	0	30	86.207	12/4/2015	12/4/2015
15120094-004B	Soil		0.318	0	0	30	94.340	12/4/2015	12/4/2015
15120094-005B	Soil		0.348	0	0	30	86.207	12/4/2015	12/4/2015
15120095-001B	Soil		0.318	0	0	30	94.340	12/4/2015	12/4/2015
15120097-001B	Soil		0.336	0	0	30	89.286	12/4/2015	12/4/2015
15120100-001B	Soil		0.341	0	0	30	87.977	12/4/2015	12/4/2015
15120104-001B	Soil		0.302	0	0	30	99.338	12/4/2015	12/4/2015
15120104-003B	Soil		0.32	0	0	30	93.750	12/4/2015	12/4/2015
15120104-010B	Soil		0.328	0	0	30	91.463	12/4/2015	12/4/2015
15120104-019B	Soil		0.341	0	0	30	87.977	12/4/2015	12/4/2015
15120104-021B	Soil		0.334	0	0	30	89.820	12/4/2015	12/4/2015
15120132-001A	Soil		0.307	0	0	30	97.720	12/4/2015	12/4/2015
15120132-002A	Soil		0.375	0	0	30	80.000	12/4/2015	12/4/2015
15120134-001A	Soil		0.365	0	0	30	82.192	12/4/2015	12/4/2015
15120138-001A	Soil		0.329	0	0	30	91.185	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS2 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153160**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS2 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153161**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2686	0.021	0.2583	0.02465	94.5	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/4/2015**	**12/4/2015**	**CETAC 2_151204D**	**3153166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2782	0.021	0.2575	0.02465	98.4	75	125	0.2686	3.48	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/4/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120095-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120097-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120100-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/8/15			30	0	0	30	1.000	12/9/2015	12/9/2015
15120263-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120267-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120069-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-001A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMSO	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120197-001A			30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-002B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMS	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120156-005B	Aqueous		5	0	0	30	6.000	12/9/2015	12/9/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156396**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.00001	0.00020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156400**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0027	0.00020	0.0025	0	108	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0027	3.64	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW3 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156382**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW3 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156383**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0025	0.00020	0.0025	0	100	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88845

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS2 120415			1	0	0	50	50.000	12/4/2015	12/4/2015
TCNLCSS2 120415			1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001BMS	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001BMSD	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120095-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-002B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-003B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-004B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120094-005B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120100-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120104-019B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120104-021B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015
15120097-001B	Soil		1	0	0	50	50.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS2 120415	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155826**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.09911	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS2 120415	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155827**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.03	0.25	10	0.09911	99.3	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120095-001BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155829**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	11.39	0.32	12.8	0.2562	87	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120095-001BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/4/2015**	**12/9/2015**	**LACHAT_151209A**	**3155830**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.32	12.8	0.2562	79	75	125	11.39	9.40	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116678

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3153298	15120095-001B	SAMP	PH_S	R116678	1	12/04/2015
3153299	15120097-001B	SAMP	PH_S	R116678	1	12/04/2015
3153300	15120100-001B	SAMP	PH_S	R116678	1	12/04/2015
3153301	15120102-001B	SAMP	PH_S	R116678	1	12/04/2015
3153302	15120102-002B	SAMP	PH_S	R116678	1	12/04/2015
3153303	15120102-003B	SAMP	PH_S	R116678	1	12/04/2015
3153304	15120102-003BDUP	DUP	PH_S	R116678	1	12/04/2015
3153305	15120102-004B	SAMP	PH_S	R116678	1	12/04/2015
3153306	15120102-005B	SAMP	PH_S	R116678	1	12/04/2015
3153307	15120102-006B	SAMP	PH_S	R116678	1	12/04/2015
3153308	15120102-008B	SAMP	PH_S	R116678	1	12/04/2015
3153309	15120102-009B	SAMP	PH_S	R116678	1	12/04/2015
3153310	15120102-010B	SAMP	PH_S	R116678	1	12/04/2015
3153311	15120102-011B	SAMP	PH_S	R116678	1	12/04/2015
3153312	15120104-001B	SAMP	PH_S	R116678	1	12/04/2015
3153313	15120104-003B	SAMP	PH_S	R116678	1	12/04/2015
3153314	15120104-005B	SAMP	PH_S	R116678	1	12/04/2015
3153315	15120104-007B	SAMP	PH_S	R116678	1	12/04/2015
3153316	15120104-009B	SAMP	PH_S	R116678	1	12/04/2015
3153317	15120104-010B	SAMP	PH_S	R116678	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120102-003BDUP	**ZZZZZ**	**DUP**	**pH Units**	**SW9045C**	**12/4/2015**	**12/4/2015**	**PH_151204C**	**3153304**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	7.61	0	0	0	0	0	0	7.66	0.655	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120097
Project: 1009341.0002.01, IL 38, DuPage Co., IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116650

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152453	PMMBLK2 12/3/15	MBLK	PMOIST	R116650	1	12/04/2015
3152454	PMLCS-S2 12/3/15	LCS	PMOIST	R116650	1	12/04/2015
3152455	PMLCS-W2 12/3/15	LCS	PMOIST	R116650	1	12/04/2015
3152456	15120079-014A	SAMP	PMOIST	R116650	1	12/04/2015
3152457	15120079-014A DUP	DUP	PMOIST	R116650	1	12/04/2015
3152458	15120079-013A	SAMP	PMOIST	R116650	1	12/04/2015
3152459	15120079-015B	SAMP	PMOIST	R116650	1	12/04/2015
3152460	15120079-016B	SAMP	PMOIST	R116650	1	12/04/2015
3152461	15120079-017B	SAMP	PMOIST	R116650	1	12/04/2015
3152462	15120079-018B	SAMP	PMOIST	R116650	1	12/04/2015
3152463	15120093-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152464	15120093-002B	SAMP	PMOIST	R116650	1	12/04/2015
3152465	15120093-003B	SAMP	PMOIST	R116650	1	12/04/2015
3152466	15120094-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152467	15120094-002B	SAMP	PMOIST	R116650	1	12/04/2015
3152468	15120094-003B	SAMP	PMOIST	R116650	1	12/04/2015
3152469	15120094-004B	SAMP	PMOIST	R116650	1	12/04/2015
3152470	15120094-005B	SAMP	PMOIST	R116650	1	12/04/2015
3152471	15120095-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152472	15120097-001B	SAMP	PMOIST	R116650	1	12/04/2015
3152473	15120105-003A	SAMP	PMOIST	R116650	1	12/04/2015
3152474	15120105-004A	SAMP	PMOIST	R116650	1	12/04/2015
3152475	15120105-004ADUP	DUP	PMOIST	R116650	1	12/04/2015
3152476	15120105-005A	SAMP	PMOIST	R116650	1	12/04/2015
3152477	15120105-006A	SAMP	PMOIST	R116650	1	12/04/2015
3152478	15120105-006ADUP	DUP	PMOIST	R116650	1	12/04/2015
3152524	15120093-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152525	15120093-002B	SAMP	PSOLID	R116650	1	12/04/2015
3152526	15120093-003B	SAMP	PSOLID	R116650	1	12/04/2015
3152527	15120094-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152528	15120094-002B	SAMP	PSOLID	R116650	1	12/04/2015
3152529	15120094-003B	SAMP	PSOLID	R116650	1	12/04/2015
3152530	15120094-004B	SAMP	PSOLID	R116650	1	12/04/2015
3152531	15120094-005B	SAMP	PSOLID	R116650	1	12/04/2015
3152532	15120095-001B	SAMP	PSOLID	R116650	1	12/04/2015
3152533	15120097-001B	SAMP	PSOLID	R116650	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK2 12/3/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152453**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S2 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152454**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.57	0.200	5	0	91.4	80	120	0	0		*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W2 12/3/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152455**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.82	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120079-014A DUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152457**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	19.5	0.200	0	0	0	0	0	20.29	3.97	20	*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-004ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152475**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	12.79	0.200	0	0	0	0	0	13.29	3.83	20	*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120105-006ADUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/3/2015**	**12/4/2015**	**BALANCE_151203B**	**3152478**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	12.79	0.200	0	0	0	0	0	12.55	1.89	20	*

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

Physical Site Location (address, incldluding number and street):
100 E. Roosevelt Road (ISGS #2635-28)

City: Oakbrook Terrace State: IL Zip Code: 60181

County: DuPage Township: York

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

Latitude: 41.860817° (Decimal Degrees) Longitude: -87.976001° (-Decimal Degrees)

Identify how the lat/long data were determined:

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

IEPA Site Number(s), if assigned: BOL: 0318995079 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 (Illinois Route 38)

Latitude: 41.860817° Longitude: -87.976001°

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 2635-28-B03 was sampled within the construction zone adjacent to ISGS #2635-28 (Strip Malls). Refer to PSI Report for ISGS #2635-28 (Strip Malls) including Table 4-3, and Figures 4-1A & 4-1B.

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 15120069.

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:

1/22/16
Date:

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

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

Analytical Data Summary
PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

Key to Data Table

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

\# = pH is less than 6.25 or greater than 9.0 standard units.
† = Concentration exceeds the most stringent MAC.
m = Concentration exceeds the MAC for an MSA.
* = Concentration exceeds the MAC for Chicago corporate limits.
c = Concentration exceeds a TACO Tier 1 RO for the construction worker exposure route.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
r = Concentration exceeds a TACO Tier 1 RO for the residential soil exposure route.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds applicable comparison criteria.

PTB #176-01; IDOT Job #D-91-339-15; Project #P-91-242-12; WorkOrder #02A

CONTAMINANTS OF CONCERN

SITE	ISGS #2635-28 (Strip Malls)		Comparison Criteria					
BORING	2635-28-B03		MACs			TACO		
SAMPLE	2635-28-B03 (0-4)							
MATRIX	Soil							
DEPTH (feet)	0-4		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
pH	8.1							
VOCs (None Detected)								
SVOCs (mg/kg)								
Benzo(a)anthracene	**0.24**		0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	**0.32**	†	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	**0.34**		0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	**0.24**		--	--	--	--	--	--
Benzo(k)fluoranthene	**0.27**		9	--	--	9	1,700	--
Chrysene	**0.30**		88	--	--	88	17,000	--
Dibenzo(a,h)anthracene	**0.11**	†	0.09	0.42	0.2	0.42	17	--
Fluoranthene	**0.61**		3,100	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	**0.22**		0.9	1.6	0.9	1.6	170	--
Phenanthrene	**0.22**		--	--	--	--	--	--
Pyrene	**0.47**		2,300	--	--	2,300	61,000	--
Inorganics (mg/kg)								
Aluminum	**13,000**		--	--	--	--	--	--
Arsenic	**12**	†	11.3	13	--	13	61	--
Barium	**130**		1,500	--	--	5,500	14,000	--
Beryllium	**0.93**		22	--	--	160	410	--
Cadmium	**0.57**		5.2	--	--	78	200	--
Calcium	**51,000**		--	--	--	--	--	--
Chromium	**22**	†	21	--	--	230	690	--
Cobalt	**15**		20	--	--	4,700	12,000	--
Copper	**28**		2,900	--	--	2,900	8,200	--
Iron	**24,000**	†m	15,000	15,900	--	--	--	--
Lead	**200**	†	107	--	--	400	700	--
Magnesium	**28,000**		325,000	--	--	--	730,000	--
Manganese	**650**	†m	630	636	--	1,600	4,100	--
Mercury	**0.058**		0.89	--	--	10	0.1	--
Nickel	**26**		100	--	--	1,600	4,100	--
Potassium	**1,500**		--	--	--	--	--	--
Sodium	**450**		--	--	--	--	--	--
Vanadium	**28**		550	--	--	550	1,400	--
Zinc	**83**		5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)								
Barium	**0.70**		--	--	--	--	--	2
Chromium	ND	U	--	--	--	--	--	0.1
Iron	**2.1**		--	--	--	--	--	5
Lead	ND	U	--	--	--	--	--	0.0075
Manganese	**0.14**		--	--	--	--	--	0.15
SPLP Metals (Not Analyzed)								

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

December 15, 2015

Ecology & Environment, Inc.
33 W. Monroe
Chicago, IL 60603

Telephone: (312) 578-9243
Fax: (312) 578-9345

Analytical Report for STAT Work Order: 15120069 Revision 0

RE: 1009341.0002.01, IL 38, DuPage County, IL

Dear Dean Tiebout:

STAT Analysis received 3 samples for the referenced project on 12/2/2015 5:45:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Frank Capoccia
Project Manager

STAT Analysis Corporation

Date: December 15, 2015

Client: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120069 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
15120069-003A	2635-28-B03 (0-4)		12/2/2015 10:40:00 AM	12/2/2015
15120069-003B	2635-28-B03 (0-4)		12/2/2015 10:40:00 AM	12/2/2015

STAT Analysis Corporation

Date: *December 15, 2015*

CLIENT: Ecology & Environment, Inc.
Project: 1009341.0002.01, IL 38, DuPage County, IL
Work Order: 15120069 Revision 0

CASE NARRATIVE

Please refer to Analytical QC Summary Report for QC outliers.

STAT Analysis Corporation
2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditations:IEPA ELAP 100445;ORELAP IL300001;AIHA-LAP, LLC 101160;NVLAP LabCode 101202-0

Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120069 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120069-003

Client Sample ID: 2635-28-B03 (0-4)
Collection Date: 12/2/2015 10:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS	**SW5035/8260B**			Prep Date: **12/3/2015**		Analyst: **PS**
Acetone	ND	0.076		mg/Kg-dry	1	12/4/2015
Benzene	ND	0.0051		mg/Kg-dry	1	12/4/2015
Bromodichloromethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
Bromoform	ND	0.0051		mg/Kg-dry	1	12/4/2015
Bromomethane	ND	0.010		mg/Kg-dry	1	12/4/2015
2-Butanone	ND	0.076		mg/Kg-dry	1	12/4/2015
Carbon disulfide	ND	0.051		mg/Kg-dry	1	12/4/2015
Carbon tetrachloride	ND	0.0051		mg/Kg-dry	1	12/4/2015
Chlorobenzene	ND	0.0051		mg/Kg-dry	1	12/4/2015
Chloroethane	ND	0.010		mg/Kg-dry	1	12/4/2015
Chloroform	ND	0.0051		mg/Kg-dry	1	12/4/2015
Chloromethane	ND	0.010		mg/Kg-dry	1	12/4/2015
Dibromochloromethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,1-Dichloroethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,2-Dichloroethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,1-Dichloroethene	ND	0.0051		mg/Kg-dry	1	12/4/2015
cis-1,2-Dichloroethene	ND	0.0051		mg/Kg-dry	1	12/4/2015
trans-1,2-Dichloroethene	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,2-Dichloropropane	ND	0.0051		mg/Kg-dry	1	12/4/2015
cis-1,3-Dichloropropene	ND	0.0020		mg/Kg-dry	1	12/4/2015
trans-1,3-Dichloropropene	ND	0.0020		mg/Kg-dry	1	12/4/2015
Ethylbenzene	ND	0.0051		mg/Kg-dry	1	12/4/2015
2-Hexanone	ND	0.020		mg/Kg-dry	1	12/4/2015
4-Methyl-2-pentanone	ND	0.020		mg/Kg-dry	1	12/4/2015
Methylene chloride	ND	0.010		mg/Kg-dry	1	12/4/2015
Methyl tert-butyl ether	ND	0.0051		mg/Kg-dry	1	12/4/2015
Styrene	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,1,2,2-Tetrachloroethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
Tetrachloroethene	ND	0.0051		mg/Kg-dry	1	12/4/2015
Toluene	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,1,1-Trichloroethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
1,1,2-Trichloroethane	ND	0.0051		mg/Kg-dry	1	12/4/2015
Trichloroethene	ND	0.0051		mg/Kg-dry	1	12/4/2015
Vinyl chloride	ND	0.0051		mg/Kg-dry	1	12/4/2015
Xylenes, Total	ND	0.015		mg/Kg-dry	1	12/4/2015
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Acenaphthene	ND	0.039		mg/Kg-dry	1	12/4/2015
Acenaphthylene	ND	0.039		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120069 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120069-003

Client Sample ID: 2635-28-B03 (0-4)
Collection Date: 12/2/2015 10:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Aniline	ND	0.39		mg/Kg-dry	1	12/4/2015
Anthracene	ND	0.039		mg/Kg-dry	1	12/4/2015
Benz(a)anthracene	0.24	0.039		mg/Kg-dry	1	12/4/2015
Benzidine	ND	0.39		mg/Kg-dry	1	12/4/2015
Benzo(a)pyrene	0.32	0.039		mg/Kg-dry	1	12/4/2015
Benzo(b)fluoranthene	0.34	0.039		mg/Kg-dry	1	12/4/2015
Benzo(g,h,i)perylene	0.24	0.039		mg/Kg-dry	1	12/4/2015
Benzo(k)fluoranthene	0.27	0.039		mg/Kg-dry	1	12/4/2015
Benzoic acid	ND	0.98		mg/Kg-dry	1	12/4/2015
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Bis(2-ethylhexyl)phthalate	ND	0.98		mg/Kg-dry	1	12/4/2015
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
Carbazole	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chloro-3-methylphenol	ND	0.39		mg/Kg-dry	1	12/4/2015
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	12/4/2015
Chrysene	0.30	0.039		mg/Kg-dry	1	12/4/2015
Dibenz(a,h)anthracene	0.11	0.039		mg/Kg-dry	1	12/4/2015
Dibenzofuran	ND	0.20		mg/Kg-dry	1	12/4/2015
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
3,3´-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
4,6-Dinitro-2-methylphenol	ND	0.39		mg/Kg-dry	1	12/4/2015
2,4-Dinitrophenol	ND	0.98		mg/Kg-dry	1	12/4/2015
2,4-Dinitrotoluene	ND	0.039		mg/Kg-dry	1	12/4/2015
2,6-Dinitrotoluene	ND	0.039		mg/Kg-dry	1	12/4/2015
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120069 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120069-003

Client Sample ID: 2635-28-B03 (0-4)
Collection Date: 12/2/2015 10:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	**SW8270C (SW3550B)**			Prep Date: **12/3/2015**		Analyst: **DM**
Fluoranthene	0.61	0.039		mg/Kg-dry	1	12/4/2015
Fluorene	ND	0.039		mg/Kg-dry	1	12/4/2015
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	12/4/2015
Hexachloroethane	ND	0.20		mg/Kg-dry	1	12/4/2015
Indeno(1,2,3-cd)pyrene	0.22	0.039		mg/Kg-dry	1	12/4/2015
Isophorone	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Methylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Methylphenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Naphthalene	ND	0.039		mg/Kg-dry	1	12/4/2015
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	12/4/2015
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
4-Nitrophenol	ND	0.39		mg/Kg-dry	1	12/4/2015
Nitrobenzene	ND	0.039		mg/Kg-dry	1	12/4/2015
N-Nitrosodi-n-propylamine	ND	0.039		mg/Kg-dry	1	12/4/2015
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	12/4/2015
N-Nitrosodiphenylamine	ND	0.20		mg/Kg-dry	1	12/4/2015
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	12/4/2015
Pentachlorophenol	ND	0.079		mg/Kg-dry	1	12/4/2015
Phenanthrene	0.22	0.039		mg/Kg-dry	1	12/4/2015
Phenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Pyrene	0.47	0.039		mg/Kg-dry	1	12/4/2015
Pyridine	ND	0.79		mg/Kg-dry	1	12/4/2015
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	12/4/2015
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Aluminum	13000	220		mg/Kg-dry	100	12/4/2015
Antimony	ND	2.2		mg/Kg-dry	10	12/4/2015
Arsenic	12	1.1		mg/Kg-dry	10	12/4/2015
Barium	130	1.1		mg/Kg-dry	10	12/4/2015
Beryllium	0.93	0.55		mg/Kg-dry	10	12/4/2015
Cadmium	0.57	0.55		mg/Kg-dry	10	12/4/2015
Calcium	51000	66		mg/Kg-dry	10	12/4/2015

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Date Reported: December 15, 2015
Date Printed: December 15, 2015

ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120069 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120069-003

Client Sample ID: 2635-28-B03 (0-4)
Collection Date: 12/2/2015 10:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	**SW6020 (SW3050B)**			Prep Date: **12/4/2015**		Analyst: **JG**
Chromium	22	1.1		mg/Kg-dry	10	12/4/2015
Cobalt	15	1.1		mg/Kg-dry	10	12/4/2015
Copper	28	2.8		mg/Kg-dry	10	12/4/2015
Iron	24000	330		mg/Kg-dry	100	12/4/2015
Lead	200	0.55		mg/Kg-dry	10	12/4/2015
Magnesium	28000	33		mg/Kg-dry	10	12/4/2015
Manganese	650	1.1		mg/Kg-dry	10	12/4/2015
Nickel	26	1.1		mg/Kg-dry	10	12/4/2015
Potassium	1500	33		mg/Kg-dry	10	12/4/2015
Selenium	ND	1.1		mg/Kg-dry	10	12/4/2015
Silver	ND	1.1		mg/Kg-dry	10	12/4/2015
Sodium	450	66		mg/Kg-dry	10	12/4/2015
Thallium	ND	1.1		mg/Kg-dry	10	12/4/2015
Vanadium	28	1.1		mg/Kg-dry	10	12/4/2015
Zinc	83	5.5		mg/Kg-dry	10	12/4/2015
TCLP Metals by ICP/MS	**SW1311/6020 (SW3005A)**			Prep Date: **12/4/2015**		Analyst: **JG**
Antimony	ND	0.0060		mg/L	2	12/11/2015
Barium	0.70	0.050		mg/L	5	12/5/2015
Beryllium	ND	0.0020		mg/L	2	12/11/2015
Boron	ND	0.10	*	mg/L	5	12/5/2015
Cadmium	ND	0.0050		mg/L	5	12/5/2015
Chromium	ND	0.010		mg/L	5	12/5/2015
Cobalt	ND	0.010		mg/L	5	12/5/2015
Iron	2.1	0.25		mg/L	5	12/5/2015
Lead	ND	0.0050		mg/L	5	12/5/2015
Manganese	0.14	0.010		mg/L	5	12/5/2015
Nickel	ND	0.020		mg/L	5	12/5/2015
Selenium	ND	0.010		mg/L	5	12/5/2015
Silver	ND	0.010		mg/L	5	12/5/2015
Thallium	ND	0.0020		mg/L	2	12/11/2015
Zinc	ND	0.050		mg/L	5	12/5/2015
TCLP Mercury	**SW1311/7470A**			Prep Date: **12/8/2015**		Analyst: **LB**
Mercury	ND	0.00020		mg/L	1	12/9/2015
Mercury	**SW7471A**			Prep Date: **12/3/2015**		Analyst: **LB**
Mercury	0.058	0.020		mg/Kg-dry	1	12/3/2015

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Date Reported: December 15, 2015
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ANALYTICAL RESULTS

Client: Ecology & Environment, Inc.
Work Order: 15120069 Revision 0
Project: 1009341.0002.01, IL 38, DuPage County, IL
Lab ID: 15120069-003

Client Sample ID: 2635-28-B03 (0-4)
Collection Date: 12/2/2015 10:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Cyanide, Total	**SW9012A**			Prep Date: **12/3/2015**		Analyst: **YZ**
Cyanide	ND	0.30		mg/Kg-dry	1	12/6/2015
pH (25 °C)	**SW9045C**			Prep Date: **12/3/2015**		Analyst: **RW**
pH	8.1			pH Units	1	12/3/2015
Percent Moisture	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Percent Moisture	15.7	0.2	*	wt%	1	12/4/2015
Solids, Total	**D2974**			Prep Date: **12/3/2015**		Analyst: **GH**
Total Solid	84.3	0.20	*	wt%	1	12/4/2015

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CHAIN OF CUSTODY RECORD

Nº: 866224 **Page :** ____ **of** ____

Company: Ecology & Environment
Project Number: 100941.0002-01 Client Tracking No.:
Project Name: IL 38
Project Location: DuPage County, IL
Sampler(s): S. Cooper
Report To: Dean Tiebout Phone:
Scott Cooper Fax:
QC Level: 1 ____ 2 ____ 3 ____ 4 ____ e-mail:

P.O. No.:
Quote No.:

Turn Around: 10 days
Results Needed: ____/____ am/pm

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers	VOC	SVOC	Total TAL metals	TCLP/SPLP TAL metals	pH	% Solids	Remarks	Lab No.:
2635-28-B01(0-4)	12-2-15	1020	S		x	AF	2	x	x	x	x	x	x		001
2635-28-B02(0-4)	12-2-15	1030	S		x	AF	2	x	x	x	x	x	x		002
2635-28-B03(0-4)	12-2-15	1040	S		x	AF	2	x	x	x	x	x	x		003

Relinquished by: (Signature) Date/Time: 12-2-15/1525
Received by: (Signature) Date/Time: 12/2/15 17
Relinquished by: (Signature) Date/Time: 12/2/15 17
Received by: (Signature) Date/Time: 12/2/15 174
Relinquished by: (Signature) Date/Time:
Received by: (Signature) Date/Time:

Comments: Please contact Dean Tiebout ~2x regarding TCLP/SPLP TAL metals analysis protocol.

Preservation Code: A = None B = HNO_3 C = NaOH D = H_2SO_4 E = HCl F = 5035/EnCore G = Other

Laboratory Work Order No.: 15120069

Received on Ice: Yes [X] No [ ]

Temperature: 36 °C

STAT Analysis Corporation

Sample Receipt Checklist

Client Name E&E

Date and Time Received: 12/2/2015 5:45:00 PM

Work Order Number 15120069

Received by: DO

Checklist completed by: Signature 12/2/15 Date

Reviewed by: Initials 12/3/15 Date

Matrix: Carrier name STAT Analysis

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels/containers?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Container or Temp Blank temperature in compliance?	Yes ☑	No ☐	Temperature	3.6 °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐	
Water - Samples pH checked?	Yes ☐	No ☐	Checked by:	
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted?	

Any No response must be detailed in the comments section below.

Comments:

Client / Person contacted: Date contacted: Contacted by:

Response:

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW5035/8260B **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4				
VBLK120315C-3	104	100	110	105				
VLCS120315C-3	110	103	116	103				
VLCSD120315C-3	106	104	115	107				
15120069-003A	81.1	95.2	131	124				
VBLK120515-4	95.3	102	97.0	102				
VLCS120515-4	98.1	102	97.8	104				
VLCSD120515-4	94.9	101	96.9	107				
15120069-001A	76.8	97.3	91.4	104				
15120069-002A	87.6	100	102	108				

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	58-122
BZMED8	=	Toluene-d8	73-122
DBFM	=	Dibromofluoromethane	65-131
DCA12D4	=	1,2-Dichloroethane-d4	71-143

*** Surrogate recovery outside acceptance limits**

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152309	BFB120315C-3	TUNE	BFB	R116647	1	12/03/2015 13:36
3152310	VSTD050R	CCV	VOC_ENCORE+	R116647	1	12/03/2015 14:44
3152311	VBLK120315C-3	MBLK	VOC_ENCORE+	R116647	1	12/03/2015 15:19
3152312	VLCS120315C-3	LCS	VOC_ENCORE+	R116647	1	12/03/2015 15:54
3152313	VLCSD120315C-3	LCSD	VOC_ENCORE+	R116647	1	12/03/2015 16:29
3152314	15120051-002A	SAMP	VOC_5035	88795	1	12/03/2015 17:14
3152315	15120051-005A	SAMP	VOC_5035	88795	1	12/03/2015 17:49
3152316	15120051-007A	SAMP	VOC_5035	88795	1	12/03/2015 18:24
3152317	15120051-009A	SAMP	VOC_5035	88795	1	12/03/2015 18:59
3152318	15120051-011A	SAMP	VOC_5035	88795	1	12/03/2015 19:34
3152319	15120051-013A	SAMP	VOC_5035	88795	1	12/03/2015 20:09
3152320	15120068-001A	SAMP	VOC_5035	88773	1	12/03/2015 20:43
3152321	15120068-002A	SAMP	VOC_5035	88773	1	12/03/2015 21:18
3152322	15120068-003A	SAMP	VOC_5035	88773	1	12/03/2015 21:53
3152323	15120068-004A	SAMP	VOC_5035	88773	1	12/03/2015 22:28
3152324	15120069-001A	SAMP	VOC_5035	88773	1	12/03/2015 23:02
3152326	15120069-002A	SAMP	VOC_5035	88773	1	12/03/2015 23:37
3152325	15120069-003A	SAMP	VOC_5035	88773	1	12/04/2015 00:12

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120315C-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152311**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	ND	0.050									
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	0.00023	0.0050									J

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116647

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120315C-3	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152311**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	ND	0.010									
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									
Toluene	0.0002	0.0050									J
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	0.00087	0.015									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120315C-3	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152312**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04428	0.0050	0.05	0	88.6	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.04326	0.0050	0.05	0	86.5	70	130	0	0		
1,1,2-Trichloroethane	0.04435	0.0050	0.05	0	88.7	70	130	0	0		
1,1-Dichloroethane	0.04362	0.0050	0.05	0	87.2	70	130	0	0		
1,1-Dichloroethene	0.04401	0.0050	0.05	0	88	70	130	0	0		
1,2-Dichloroethane	0.04418	0.0050	0.05	0	88.4	70	130	0	0		
1,2-Dichloropropane	0.04321	0.0050	0.05	0	86.4	70	130	0	0		
2-Butanone	0.09013	0.075	0.1	0	90.1	70	130	0	0		
2-Hexanone	0.08772	0.020	0.1	0	87.7	70	130	0	0		
4-Methyl-2-pentanone	0.09075	0.020	0.1	0	90.8	70	130	0	0		
Acetone	0.09108	0.075	0.1	0	91.1	50	150	0	0		
Benzene	0.04207	0.0050	0.05	0	84.1	70	130	0	0		
Bromodichloromethane	0.0455	0.0050	0.05	0	91	70	130	0	0		
Bromoform	0.048	0.0050	0.05	0	96	70	130	0	0		
Bromomethane	0.04663	0.010	0.05	0	93.3	70	130	0	0		
Carbon disulfide	0.09568	0.050	0.1	0	95.7	70	130	0	0		
Carbon tetrachloride	0.04272	0.0050	0.05	0	85.4	70	130	0	0		
Chlorobenzene	0.04411	0.0050	0.05	0	88.2	70	130	0	0		
Chloroethane	0.04824	0.010	0.05	0	96.5	70	130	0	0		
Chloroform	0.04706	0.0050	0.05	0	94.1	70	130	0	0		
Chloromethane	0.04618	0.010	0.05	0	92.4	70	130	0	0		
cis-1,2-Dichloroethene	0.04452	0.0050	0.05	0	89	70	130	0	0		
cis-1,3-Dichloropropene	0.04371	0.0020	0.05	0	87.4	70	130	0	0		
Dibromochloromethane	0.04609	0.0050	0.05	0	92.2	70	130	0	0		
Ethylbenzene	0.04365	0.0050	0.05	0.00023	86.8	70	130	0	0		
Methyl tert-butyl ether	0.05201	0.0050	0.05	0	104	70	130	0	0		
Methylene chloride	0.05113	0.010	0.05	0	102	70	130	0	0		
Styrene	0.04618	0.0050	0.05	0	92.4	70	130	0	0		
Tetrachloroethene	0.04325	0.0050	0.05	0	86.5	70	130	0	0		
Toluene	0.04359	0.0050	0.05	0.0002	86.8	70	130	0	0		
trans-1,2-Dichloroethene	0.04952	0.0050	0.05	0	99	70	130	0	0		
trans-1,3-Dichloropropene	0.04553	0.0020	0.05	0	91.1	70	130	0	0		
Trichloroethene	0.04345	0.0050	0.05	0	86.9	70	130	0	0		
Vinyl chloride	0.04723	0.0050	0.05	0	94.5	70	130	0	0		
Xylenes, Total	0.1335	0.015	0.15	0.00087	88.4	70	130	0	0		

Qualifiers:
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116647

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120315C-3	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/3/2015**	**VOA-3_151203A**	**3152313**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04534	0.0050	0.05	0	90.7	70	130	0.04428	2.37	20	
1,1,2,2-Tetrachloroethane	0.04257	0.0050	0.05	0	85.1	70	130	0.04326	1.61	20	
1,1,2-Trichloroethane	0.04182	0.0050	0.05	0	83.6	70	130	0.04435	5.87	20	
1,1-Dichloroethane	0.04368	0.0050	0.05	0	87.4	70	130	0.04362	0.137	20	
1,1-Dichloroethene	0.04357	0.0050	0.05	0	87.1	70	130	0.04401	1.00	20	
1,2-Dichloroethane	0.04543	0.0050	0.05	0	90.9	70	130	0.04418	2.79	20	
1,2-Dichloropropane	0.0437	0.0050	0.05	0	87.4	70	130	0.04321	1.13	20	
2-Butanone	0.09061	0.075	0.1	0	90.6	70	130	0.09013	0.531	20	
2-Hexanone	0.0842	0.020	0.1	0	84.2	70	130	0.08772	4.09	20	
4-Methyl-2-pentanone	0.09272	0.020	0.1	0	92.7	70	130	0.09075	2.15	20	
Acetone	0.09109	0.075	0.1	0	91.1	50	150	0.09108	0.0110	20	
Benzene	0.04274	0.0050	0.05	0	85.5	70	130	0.04207	1.58	20	
Bromodichloromethane	0.04591	0.0050	0.05	0	91.8	70	130	0.0455	0.897	20	
Bromoform	0.04693	0.0050	0.05	0	93.9	70	130	0.048	2.25	20	
Bromomethane	0.04554	0.010	0.05	0	91.1	70	130	0.04663	2.37	20	
Carbon disulfide	0.09593	0.050	0.1	0	95.9	70	130	0.09568	0.261	20	
Carbon tetrachloride	0.04401	0.0050	0.05	0	88	70	130	0.04272	2.97	20	
Chlorobenzene	0.04213	0.0050	0.05	0	84.3	70	130	0.04411	4.59	20	
Chloroethane	0.04914	0.010	0.05	0	98.3	70	130	0.04824	1.85	20	
Chloroform	0.04712	0.0050	0.05	0	94.2	70	130	0.04706	0.127	20	
Chloromethane	0.04661	0.010	0.05	0	93.2	70	130	0.04618	0.927	20	
cis-1,2-Dichloroethene	0.04449	0.0050	0.05	0	89	70	130	0.04452	0.0674	20	
cis-1,3-Dichloropropene	0.04425	0.0020	0.05	0	88.5	70	130	0.04371	1.23	20	
Dibromochloromethane	0.04529	0.0050	0.05	0	90.6	70	130	0.04609	1.75	20	
Ethylbenzene	0.04208	0.0050	0.05	0.00023	83.7	70	130	0.04365	3.66	20	
Methyl tert-butyl ether	0.05213	0.0050	0.05	0	104	70	130	0.05201	0.230	20	
Methylene chloride	0.047	0.010	0.05	0	94	70	130	0.05113	8.42	20	
Styrene	0.04453	0.0050	0.05	0	89.1	70	130	0.04618	3.64	20	
Tetrachloroethene	0.04183	0.0050	0.05	0	83.7	70	130	0.04325	3.34	20	
Toluene	0.04377	0.0050	0.05	0.0002	87.1	70	130	0.04359	0.412	20	
trans-1,2-Dichloroethene	0.04948	0.0050	0.05	0	99	70	130	0.04952	0.0808	20	
trans-1,3-Dichloropropene	0.04387	0.0020	0.05	0	87.7	70	130	0.04553	3.71	20	
Trichloroethene	0.04391	0.0050	0.05	0	87.8	70	130	0.04345	1.05	20	
Vinyl chloride	0.04747	0.0050	0.05	0	94.9	70	130	0.04723	0.507	20	
Xylenes, Total	0.13	0.015	0.15	0.00087	86.1	70	130	0.1335	2.61	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116691

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3153515	BFB120515-4	TUNE	BFB	R116691	1	12/05/2015 15:50
3153516	VSTD100	CCV	VOC_ENCORE+	R116691	1	12/05/2015 16:51
3153517	VBLK120515-4	MBLK	VOC_ENCORE+	R116691	1	12/05/2015 17:27
3153518	VLCS120515-4	LCS	VOC_ENCORE+	R116691	1	12/05/2015 18:02
3153519	VLCSD120515-4	LCSD	VOC_ENCORE+	R116691	1	12/05/2015 18:37
3153520	15120029-009A	RA	VOC_5035	88773	1	12/05/2015 19:22
3153521	15120029-010A	SAMP	VOC_5035	88773	1	12/05/2015 19:57
3153522	15120029-011A	SAMP	VOC_5035	88773	1	12/05/2015 20:31
3153523	15120029-013A	SAMP	VOC_5035	88773	1	12/05/2015 21:06
3153531	15120068-002A	SAMP	VOC_5035	88818	1	12/05/2015 21:40
3153538	15120068-004A	SAMP	VOC_5035	88818	1	12/05/2015 22:15
3153539	15120069-001A	SAMP	VOC_5035	88843	1	12/05/2015 22:49
3153540	15120069-002A	SAMP	VOC_5035	88843	1	12/05/2015 23:23
3153541	15120037-004A	SAMP	VOC_5035	88818	1	12/05/2015 23:58
3153542	15120037-001A	SAMP	VOC_5035	88818	1	12/06/2015 01:06

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120515-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153517**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.0050									
1,1,2,2-Tetrachloroethane	ND	0.0050									
1,1,2-Trichloroethane	ND	0.0050									
1,1-Dichloroethane	ND	0.0050									
1,1-Dichloroethene	ND	0.0050									
1,2-Dichloroethane	ND	0.0050									
1,2-Dichloropropane	ND	0.0050									
2-Butanone	ND	0.075									
2-Hexanone	ND	0.020									
4-Methyl-2-pentanone	ND	0.020									
Acetone	ND	0.075									
Benzene	ND	0.0050									
Bromodichloromethane	ND	0.0050									
Bromoform	ND	0.0050									
Bromomethane	ND	0.010									
Carbon disulfide	0.00032	0.050									J
Carbon tetrachloride	ND	0.0050									
Chlorobenzene	ND	0.0050									
Chloroethane	ND	0.010									
Chloroform	ND	0.0050									
Chloromethane	ND	0.010									
cis-1,2-Dichloroethene	ND	0.0050									
cis-1,3-Dichloropropene	ND	0.0020									
Dibromochloromethane	ND	0.0050									
Ethylbenzene	ND	0.0050									
Methyl tert-butyl ether	ND	0.0050									
Methylene chloride	0.00201	0.010									J
Styrene	ND	0.0050									
Tetrachloroethene	ND	0.0050									

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Volatiles
BatchID: R116691

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VBLK120515-4	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153517**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Toluene	ND	0.0050									
trans-1,2-Dichloroethene	ND	0.0050									
trans-1,3-Dichloropropene	ND	0.0020									
Trichloroethene	ND	0.0050									
Vinyl chloride	ND	0.0050									
Xylenes, Total	ND	0.015									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCS120515-4	**ZZZZZ**	**LCS**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153518**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.04317	0.0050	0.05	0	86.3	70	130	0	0		
1,1,2,2-Tetrachloroethane	0.0432	0.0050	0.05	0	86.4	70	130	0	0		
1,1,2-Trichloroethane	0.04499	0.0050	0.05	0	90	70	130	0	0		
1,1-Dichloroethane	0.0424	0.0050	0.05	0	84.8	70	130	0	0		
1,1-Dichloroethene	0.04306	0.0050	0.05	0	86.1	70	130	0	0		
1,2-Dichloroethane	0.03821	0.0050	0.05	0	76.4	70	130	0	0		
1,2-Dichloropropane	0.04412	0.0050	0.05	0	88.2	70	130	0	0		
2-Butanone	0.0807	0.075	0.1	0	80.7	70	130	0	0		
2-Hexanone	0.08014	0.020	0.1	0	80.1	70	130	0	0		
4-Methyl-2-pentanone	0.07971	0.020	0.1	0	79.7	70	130	0	0		
Acetone	0.0693	0.075	0.1	0	69.3	50	150	0	0		J
Benzene	0.04474	0.0050	0.05	0	89.5	70	130	0	0		
Bromodichloromethane	0.04176	0.0050	0.05	0	83.5	70	130	0	0		
Bromoform	0.04315	0.0050	0.05	0	86.3	70	130	0	0		
Bromomethane	0.04958	0.010	0.05	0	99.2	70	130	0	0		
Carbon disulfide	0.08978	0.050	0.1	0.00032	89.5	70	130	0	0		
Carbon tetrachloride	0.04427	0.0050	0.05	0	88.5	70	130	0	0		
Chlorobenzene	0.04357	0.0050	0.05	0	87.1	70	130	0	0		
Chloroethane	0.05723	0.010	0.05	0	114	70	130	0	0		
Chloroform	0.04128	0.0050	0.05	0	82.6	70	130	0	0		
Chloromethane	0.04997	0.010	0.05	0	99.9	70	130	0	0		
cis-1,2-Dichloroethene	0.04106	0.0050	0.05	0	82.1	70	130	0	0		
cis-1,3-Dichloropropene	0.04167	0.0020	0.05	0	83.3	70	130	0	0		
Dibromochloromethane	0.04367	0.0050	0.05	0	87.3	70	130	0	0		
Ethylbenzene	0.04429	0.0050	0.05	0	88.6	70	130	0	0		
Methyl tert-butyl ether	0.04013	0.0050	0.05	0	80.3	70	130	0	0		
Methylene chloride	0.04193	0.010	0.05	0.00201	79.8	70	130	0	0		
Styrene	0.04179	0.0050	0.05	0	83.6	70	130	0	0		
Tetrachloroethene	0.0454	0.0050	0.05	0	90.8	70	130	0	0		
Toluene	0.04473	0.0050	0.05	0	89.5	70	130	0	0		
trans-1,2-Dichloroethene	0.04694	0.0050	0.05	0	93.9	70	130	0	0		
trans-1,3-Dichloropropene	0.04305	0.0020	0.05	0	86.1	70	130	0	0		
Trichloroethene	0.04421	0.0050	0.05	0	88.4	70	130	0	0		
Vinyl chloride	0.05126	0.0050	0.05	0	103	70	130	0	0		
Xylenes, Total	0.1313	0.015	0.15	0	87.6	70	130	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
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CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

GCMS Volatiles

BatchID: R116691

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
VLCSD120515-4	**ZZZZZ**	**LCSD**	**mg/Kg**	**SW5035/8260B**		**12/5/2015**	**VOA-4_151205A**	**3153519**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	0.0434	0.0050	0.05	0	86.8	70	130	0.04317	0.531	20	
1,1,2,2-Tetrachloroethane	0.04402	0.0050	0.05	0	88	70	130	0.0432	1.88	20	
1,1,2-Trichloroethane	0.04512	0.0050	0.05	0	90.2	70	130	0.04499	0.289	20	
1,1-Dichloroethane	0.04231	0.0050	0.05	0	84.6	70	130	0.0424	0.212	20	
1,1-Dichloroethene	0.04308	0.0050	0.05	0	86.2	70	130	0.04306	0.0464	20	
1,2-Dichloroethane	0.03878	0.0050	0.05	0	77.6	70	130	0.03821	1.48	20	
1,2-Dichloropropane	0.04546	0.0050	0.05	0	90.9	70	130	0.04412	2.99	20	
2-Butanone	0.07956	0.075	0.1	0	79.6	70	130	0.0807	1.42	20	
2-Hexanone	0.0804	0.020	0.1	0	80.4	70	130	0.08014	0.324	20	
4-Methyl-2-pentanone	0.07877	0.020	0.1	0	78.8	70	130	0.07971	1.19	20	
Acetone	0.06744	0.075	0.1	0	67.4	50	150	0.0693	2.72	20	J
Benzene	0.04531	0.0050	0.05	0	90.6	70	130	0.04474	1.27	20	
Bromodichloromethane	0.04135	0.0050	0.05	0	82.7	70	130	0.04176	0.987	20	
Bromoform	0.04414	0.0050	0.05	0	88.3	70	130	0.04315	2.27	20	
Bromomethane	0.05091	0.010	0.05	0	102	70	130	0.04958	2.65	20	
Carbon disulfide	0.09096	0.050	0.1	0.00032	90.6	70	130	0.08978	1.31	20	
Carbon tetrachloride	0.04348	0.0050	0.05	0	87	70	130	0.04427	1.80	20	
Chlorobenzene	0.04363	0.0050	0.05	0	87.3	70	130	0.04357	0.138	20	
Chloroethane	0.05822	0.010	0.05	0	116	70	130	0.05723	1.72	20	
Chloroform	0.04147	0.0050	0.05	0	82.9	70	130	0.04128	0.459	20	
Chloromethane	0.0523	0.010	0.05	0	105	70	130	0.04997	4.56	20	
cis-1,2-Dichloroethene	0.04162	0.0050	0.05	0	83.2	70	130	0.04106	1.35	20	
cis-1,3-Dichloropropene	0.04186	0.0020	0.05	0	83.7	70	130	0.04167	0.455	20	
Dibromochloromethane	0.0439	0.0050	0.05	0	87.8	70	130	0.04367	0.525	20	
Ethylbenzene	0.04442	0.0050	0.05	0	88.8	70	130	0.04429	0.293	20	
Methyl tert-butyl ether	0.04092	0.0050	0.05	0	81.8	70	130	0.04013	1.95	20	
Methylene chloride	0.04334	0.010	0.05	0.00201	82.7	70	130	0.04193	3.31	20	
Styrene	0.04187	0.0050	0.05	0	83.7	70	130	0.04179	0.191	20	
Tetrachloroethene	0.04521	0.0050	0.05	0	90.4	70	130	0.0454	0.419	20	
Toluene	0.04458	0.0050	0.05	0	89.2	70	130	0.04473	0.336	20	
trans-1,2-Dichloroethene	0.04759	0.0050	0.05	0	95.2	70	130	0.04694	1.38	20	
trans-1,3-Dichloropropene	0.0437	0.0020	0.05	0	87.4	70	130	0.04305	1.50	20	
Trichloroethene	0.04459	0.0050	0.05	0	89.2	70	130	0.04421	0.856	20	
Vinyl chloride	0.05287	0.0050	0.05	0	106	70	130	0.05126	3.09	20	
Xylenes, Total	0.1321	0.015	0.15	0	88.1	70	130	0.1313	0.585	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
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* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL
Test No: SW8270C **Matrix:** S

QC SUMMARY REPORT
SURROGATE RECOVERIES

Sample ID	CLPH2D4	DCBZ12D4	NO2BZD5	PH246BR	PH2F	PHD5	PHEN2F	PHEND14
15110611-002BMS	44.7	48.0	44.4	71.6	40.3	43.2	58.0	63.9
15110611-002BMSD	42.8	46.6	41.6	80.7	40.0	41.4	57.3	77.0
15120069-001B	56.1	60.4	51.4	89.2	50.0	52.1	70.0	83.8
MB-88783-SVOC	67.8	71.0	65.9	107	65.8	67.3	82.3	83.3
LCS-88783-SVOC	68.2	72.3	71.3	124 *	62.8	68.2	89.5	85.7
15120069-002B	65.2	63.4	61.2	117	58.8	66.2	83.1	85.0
15120069-003B	66.4	66.4	61.3	112	59.6	66.1	80.1	80.0

Acronym		Surrogate	QC Limits
CLPH2D4	=	2-Chlorophenol-d4	20-130
DCBZ12D4	=	1,2-Dichlorobenzene-d4	20-130
NO2BZD5	=	Nitrobenzene-d5	23-120
PH246BR	=	2,4,6-Tribromophenol	19-122
PH2F	=	2-Fluorophenol	25-121
PHD5	=	Phenol-d5	24-113
PHEN2F	=	2-Fluorobiphenyl	30-115
PHEND14	=	4-Terphenyl-d14	18-137

*** Surrogate recovery outside acceptance limits**

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
MB-88783-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
LCS-88783-SVOC			0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-002B	Soil		0.03024	0	0	1	33.069	12/3/2015	12/3/2015
15110611-010B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-012B	Soil		0.03	0	0	1	33.333	12/3/2015	12/3/2015
15110611-020B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120064-001B	Soil		0.03019	0	0	1	33.124	12/3/2015	12/3/2015
15120064-002B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120064-003B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120064-004B	Soil		0.03005	0	0	1	33.278	12/3/2015	12/3/2015
15120064-005B	Soil		0.03016	0	0	1	33.156	12/3/2015	12/3/2015
15120064-006B	Soil		0.03003	0	0	1	33.300	12/3/2015	12/3/2015
15120065-001B	Soil		0.03018	0	0	1	33.135	12/3/2015	12/3/2015
15120065-002B	Soil		0.03003	0	0	1	33.300	12/3/2015	12/3/2015
15120067-001B	Soil		0.03007	0	0	1	33.256	12/3/2015	12/3/2015
15120067-002B	Soil		0.03035	0	0	1	32.949	12/3/2015	12/3/2015
15120067-003B	Soil		0.03022	0	0	1	33.091	12/3/2015	12/3/2015
15120067-004B	Soil		0.0303	0	0	1	33.003	12/3/2015	12/3/2015
15120067-005B	Soil		0.03026	0	0	1	33.047	12/3/2015	12/3/2015
15110611-002BMS	Soil		0.03023	0	0	1	33.080	12/3/2015	12/3/2015
15110611-002BMSD	Soil		0.03023	0	0	1	33.080	12/3/2015	12/3/2015
15120069-001B	Soil		0.03042	0	0	1	32.873	12/3/2015	12/3/2015
15120069-002B	Soil		0.03039	0	0	1	32.906	12/3/2015	12/3/2015
15120069-003B	Soil		0.03013	0	0	1	33.190	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	ND	0.033									
Acenaphthylene	ND	0.033									
Aniline	ND	0.33									
Anthracene	ND	0.033									
Benz(a)anthracene	ND	0.033									
Benzidine	ND	0.33									
Benzo(a)pyrene	ND	0.033									
Benzo(b)fluoranthene	ND	0.033									
Benzo(g,h,i)perylene	ND	0.033									
Benzo(k)fluoranthene	ND	0.033									
Benzoic acid	ND	0.83									
Benzyl alcohol	ND	0.17									
Bis(2-chloroethoxy)methane	ND	0.17									
Bis(2-chloroethyl)ether	ND	0.17									
Bis(2-ethylhexyl)phthalate	ND	0.83									
4-Bromophenyl phenyl ether	ND	0.17									
Butyl benzyl phthalate	ND	0.17									
Carbazole	ND	0.17									
4-Chloroaniline	ND	0.17									

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88783

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4-Chloro-3-methylphenol	ND	0.33									
2-Chloronaphthalene	ND	0.17									
2-Chlorophenol	ND	0.17									
4-Chlorophenyl phenyl ether	ND	0.17									
Chrysene	ND	0.033									
Dibenz(a,h)anthracene	ND	0.033									
Dibenzofuran	ND	0.17									
1,2-Dichlorobenzene	ND	0.17									
1,3-Dichlorobenzene	ND	0.17									
1,4-Dichlorobenzene	ND	0.17									
3,3´-Dichlorobenzidine	ND	0.17									
2,4-Dichlorophenol	ND	0.17									
Diethyl phthalate	ND	0.17									
2,4-Dimethylphenol	ND	0.17									
Dimethyl phthalate	ND	0.17									
4,6-Dinitro-2-methylphenol	ND	0.33									
2,4-Dinitrophenol	ND	0.83									
2,4-Dinitrotoluene	ND	0.033									
2,6-Dinitrotoluene	ND	0.033									
Di-n-butyl phthalate	ND	0.17									
Di-n-octyl phthalate	ND	0.17									
Fluoranthene	ND	0.033									
Fluorene	ND	0.033									
Hexachlorobenzene	ND	0.17									
Hexachlorobutadiene	ND	0.17									
Hexachlorocyclopentadiene	ND	0.17									
Hexachloroethane	ND	0.17									
Indeno(1,2,3-cd)pyrene	ND	0.033									
Isophorone	ND	0.17									
2-Methylnaphthalene	ND	0.17									
2-Methylphenol	ND	0.17									
4-Methylphenol	ND	0.17									
Naphthalene	ND	0.033									
2-Nitroaniline	ND	0.17									
3-Nitroaniline	ND	0.17									
4-Nitroaniline	ND	0.17									
2-Nitrophenol	ND	0.17									
4-Nitrophenol	ND	0.33									
Nitrobenzene	ND	0.033									
N-Nitrosodi-n-propylamine	ND	0.033									
N-Nitrosodimethylamine	ND	0.17									
N-Nitrosodiphenylamine	ND	0.17									
2, 2'-oxybis(1-Chloropropane)	ND	0.17									
Pentachlorophenol	ND	0.067									
Phenanthrene	ND	0.033									
Phenol	ND	0.17									
Pyrene	ND	0.033									
Pyridine	ND	0.67									
1,2,4-Trichlorobenzene	ND	0.17									

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
GCMS Semivolatiles
BatchID: 88783

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
MB-88783-SVOC	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152361**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	0.17									
2,4,6-Trichlorophenol	ND	0.17									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
LCS-88783-SVOC	**ZZZZZ**	**LCS**	**mg/Kg**	**SW8270C**	**12/3/2015**	**12/3/2015**	**SVOC-7_151203B**	**3152367**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.404	0.033	1.667	0	84.2	37	134	0	0		
4-Chloro-3-methylphenol	2.853	0.33	3.333	0	85.6	29	134	0	0		
2-Chlorophenol	2.346	0.17	3.333	0	70.4	29	105	0	0		
1,4-Dichlorobenzene	1.204	0.17	1.667	0	72.2	26	111	0	0		
2,4-Dinitrotoluene	1.584	0.033	1.667	0	95	46	125	0	0		
4-Nitrophenol	3.012	0.33	3.333	0	90.4	12	146	0	0		
N-Nitrosodi-n-propylamine	1.135	0.033	1.667	0	68.1	29	109	0	0		
Pentachlorophenol	3.613	0.067	3.333	0	108	10	192	0	0		
Phenol	2.224	0.17	3.333	0	66.7	27	104	0	0		
Pyrene	1.399	0.033	1.667	0	83.9	42	148	0	0		
1,2,4-Trichlorobenzene	1.366	0.17	1.667	0	81.9	55	106	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-002BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-5_151204A**	**3152572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.161	0.040	2.003	0	58	24	139	0	0		
4-Chloro-3-methylphenol	2.239	0.40	4.004	0	55.9	28	121	0	0		
2-Chlorophenol	1.855	0.20	4.004	0	46.3	21	102	0	0		
1,4-Dichlorobenzene	0.9567	0.20	2.003	0	47.8	27	95	0	0		
2,4-Dinitrotoluene	1.244	0.040	2.003	0	62.1	32	127	0	0		
4-Nitrophenol	2.439	0.40	4.004	0	60.9	10	156	0	0		
N-Nitrosodi-n-propylamine	0.8154	0.040	2.003	0	40.7	16	122	0	0		
Pentachlorophenol	2.706	0.080	4.004	0	67.6	10	204	0	0		
Phenol	1.728	0.20	4.004	0	43.2	20	103	0	0		
Pyrene	1.299	0.040	2.003	0	64.8	10	184	0	0		
1,2,4-Trichlorobenzene	1.064	0.20	2.003	0	53.1	55	106	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-002BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW8270C**	**12/3/2015**	**12/4/2015**	**SVOC-5_151204A**	**3152593**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.215	0.040	2.003	0	60.7	24	139	1.161	4.52	57	
4-Chloro-3-methylphenol	2.294	0.40	4.004	0	57.3	28	121	2.239	2.44	88	
2-Chlorophenol	1.759	0.20	4.004	0	43.9	21	102	1.855	5.30	49	
1,4-Dichlorobenzene	0.9672	0.20	2.003	0	48.3	27	95	0.9567	1.08	43	
2,4-Dinitrotoluene	1.433	0.040	2.003	0	71.5	32	127	1.244	14.1	37	
4-Nitrophenol	2.852	0.40	4.004	0	71.2	10	156	2.439	15.6	56	
N-Nitrosodi-n-propylamine	0.7849	0.040	2.003	0	39.2	16	122	0.8154	3.80	47	
Pentachlorophenol	3.237	0.080	4.004	0	80.8	10	204	2.706	17.9	47	
Phenol	1.62	0.20	4.004	0	40.5	20	103	1.728	6.48	66	
Pyrene	1.533	0.040	2.003	0	76.5	10	184	1.299	16.5	51	
1,2,4-Trichlorobenzene	1.009	0.20	2.003	0	50.4	55	106	1.064	5.37	23	S

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88809

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
ILCSS1 12/4/15			1	0	0	50	50.000	12/4/2015	12/4/2015
15110611-006B	Soil		1.049	0	0	50	47.664	12/4/2015	12/4/2015
15110611-006BMS	Soil		1.043	0	0	50	47.939	12/4/2015	12/4/2015
15110611-006BMSD	Soil		1.047	0	0	50	47.755	12/4/2015	12/4/2015
15110611-010B	Soil		1.035	0	0	50	48.309	12/4/2015	12/4/2015
15120068-001B	Soil		1.08	0	0	50	46.296	12/4/2015	12/4/2015
15120068-002B	Soil		1.089	0	0	50	45.914	12/4/2015	12/4/2015
15120068-003B	Soil		1.051	0	0	50	47.574	12/4/2015	12/4/2015
15120068-004B	Soil		1.052	0	0	50	47.529	12/4/2015	12/4/2015
15120069-001B	Soil		1.05	0	0	50	47.619	12/4/2015	12/4/2015
15120069-002B	Soil		1.055	0	0	50	47.393	12/4/2015	12/4/2015
15120069-003B	Soil		1.075	0	0	50	46.512	12/4/2015	12/4/2015
15120065-001B	Soil		1.063	0	0	50	47.037	12/4/2015	12/4/2015
15120065-002B	Soil		1.012	0	0	50	49.407	12/4/2015	12/4/2015
15120067-001B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120067-002B	Soil		1.013	0	0	50	49.358	12/4/2015	12/4/2015
15120067-003B	Soil		1.072	0	0	50	46.642	12/4/2015	12/4/2015
15120067-004B	Soil		1.065	0	0	50	46.948	12/4/2015	12/4/2015
15120067-005B	Soil		1.011	0	0	50	49.456	12/4/2015	12/4/2015
15120144-001B	Soil		1.082	0	0	50	46.211	12/4/2015	12/4/2015
15120144-002B	Soil		1.069	0	0	50	46.773	12/4/2015	12/4/2015
15120144-003B	Soil		1.01	0	0	50	49.505	12/4/2015	12/4/2015
15120145-001B	Soil		1.092	0	0	50	45.788	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	ND	10									
Antimony	1.498	1.0									
Arsenic	ND	0.50									
Barium	ND	0.50									
Beryllium	ND	0.25									
Cadmium	ND	0.25									
Calcium	ND	30									
Chromium	ND	0.50									
Cobalt	ND	0.50									
Copper	ND	1.2									
Iron	ND	15									
Lead	0.0515	0.25									J
Magnesium	ND	15									
Manganese	ND	0.50									
Nickel	ND	0.50									
Potassium	ND	15									
Selenium	ND	0.25									
Silver	0.0215	0.25									J
Sodium	ND	30									

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBS1 12/4/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152976**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.032	0.50									J
Vanadium	ND	0.50									
Zinc	ND	2.5									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152979**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	23.34	10	25	0	93.4	80	120	0	0		
Arsenic	24.22	0.50	25	0	96.9	80	120	0	0		
Beryllium	24.28	0.25	25	0	97.1	80	120	0	0		
Cadmium	25.26	0.25	25	0	101	80	120	0	0		
Chromium	24.26	0.50	25	0	97.1	80	120	0	0		
Cobalt	24.18	0.50	25	0	96.7	80	120	0	0		
Iron	97.7	15	100	0	97.7	80	120	0	0		
Lead	25.04	0.25	25	0.0515	99.9	80	120	0	0		
Magnesium	92	15	100	0	92	80	120	0	0		
Manganese	24.37	0.50	25	0	97.5	80	120	0	0		
Nickel	23.45	0.50	25	0	93.8	80	120	0	0		
Potassium	95.5	15	100	0	95.5	80	120	0	0		
Selenium	22.84	0.25	25	0	91.3	80	120	0	0		
Silver	10.57	0.25	10	0.0215	105	80	120	0	0		
Vanadium	23.9	0.50	25	0	95.6	80	120	0	0		
Zinc	20.64	2.5	25	0	82.6	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSS1 12/4/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154062**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	19.57	1.0	12.5	1.498	145	80	120	0	0		BS
Barium	27.12	0.50	25	0	108	80	120	0	0		
Calcium	97.1	30	100	0	97.1	80	120	0	0		
Copper	24.55	1.2	25	0	98.2	80	120	0	0		
Sodium	94.4	30	100	0	94.4	80	120	0	0		
Thallium	24.84	0.50	25	0.032	99.2	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	799.6	23	28.84	716.4	288	75	125	0	0		S
Arsenic	31.15	1.2	28.84	0.6849	106	75	125	0	0		
Beryllium	29.58	0.58	28.84	0.08776	102	75	125	0	0		
Cadmium	30.38	0.58	28.84	0	105	75	125	0	0		
Chromium	31.49	1.2	28.84	1.393	104	75	125	0	0		
Cobalt	31.21	1.2	28.84	1.387	103	75	125	0	0		
Iron	2021	35	115.4	1834	163	75	125	0	0		S
Lead	33.34	0.58	28.84	1.892	109	75	125	0	0		
Magnesium	3462	35	115.4	3189	237	75	125	0	0		S
Manganese	54.9	1.2	28.84	23.45	109	75	125	0	0		
Nickel	31.18	1.2	28.84	2.191	101	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152982**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Potassium	262.5	35	115.4	134	111	75	125	0	0		
Selenium	29.78	0.58	28.84	0	103	75	125	0	0		
Silver	12.58	0.58	11.54	0.05392	109	75	125	0	0		
Vanadium	32.45	1.2	28.84	2.302	105	75	125	0	0		
Zinc	32.12	5.8	28.84	4.955	94.2	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153571**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	33.19	1.2	28.84	2.77	105	75	125	0	0		
Calcium	6080	69	115.4	5799	244	75	125	0	0		S
Copper	28.86	2.9	28.84	0	100	75	125	0	0		
Iron	1924	35	115.4	1870	46.3	75	125	0	0		S
Sodium	135	69	115.4	0	117	75	125	0	0		
Thallium	27.61	1.2	28.84	0	95.7	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204A**	**3152983**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Aluminum	769.5	23	28.73	716.4	185	75	125	799.6	3.83	20	S
Arsenic	29.82	1.1	28.73	0.6849	101	75	125	31.15	4.37	20	
Beryllium	28.49	0.57	28.73	0.08776	98.8	75	125	29.58	3.77	20	
Cadmium	29.43	0.57	28.73	0	102	75	125	30.38	3.16	20	
Chromium	29.88	1.1	28.73	1.393	99.2	75	125	31.49	5.24	20	
Cobalt	29	1.1	28.73	1.387	96.1	75	125	31.21	7.33	20	
Iron	1887	34	114.9	1834	46.5	75	125	2021	6.86	20	S
Lead	30.96	0.57	28.73	1.892	101	75	125	33.34	7.40	20	
Magnesium	3212	34	114.9	3189	19.8	75	125	3462	7.51	20	S
Manganese	52.05	1.1	28.73	23.45	99.5	75	125	54.9	5.33	20	
Nickel	29.6	1.1	28.73	2.191	95.4	75	125	31.18	5.19	20	
Potassium	251.7	34	114.9	134	102	75	125	262.5	4.19	20	
Selenium	27.83	0.57	28.73	0	96.8	75	125	29.78	6.78	20	
Silver	11.92	0.57	11.49	0.05392	103	75	125	12.58	5.32	20	
Vanadium	30.31	1.1	28.73	2.302	97.5	75	125	32.45	6.82	20	
Zinc	30.28	5.7	28.73	4.955	88.1	75	125	32.12	5.90	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110611-006BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW6020**	**12/4/2015**	**12/4/2015**	**ICPMS_151204B**	**3153572**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Barium	31.52	1.1	28.73	2.77	100	75	125	35.44	11.7	20	
Calcium	5804	69	114.9	5799	4.64	75	125	6253	7.45	20	S
Copper	27.72	2.9	28.73	0	96.5	75	125	30.06	8.08	20	
Iron	1869	34	114.9	1870	-1.39	75	125	2021	7.84	20	S
Sodium	128.3	69	114.9	0	112	75	125	150.2	15.7	20	
Thallium	26.77	1.1	28.73	0	93.2	75	125	29.96	11.3	20	

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW3 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTA1 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-002AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
IMBTB 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003A	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120077-003AMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153663**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00252	0.015									J
Barium	0.00723	0.050									J
Beryllium	0.00133	0.0050									J
Boron	ND	0.20									*
Cadmium	ND	0.0050									
Chromium	0.00263	0.010									J
Cobalt	ND	0.010									
Iron	ND	0.25									
Lead	0.00622	0.0050									
Manganese	ND	0.010									
Nickel	0.00163	0.020									J
Selenium	0.02254	0.010									
Silver	0.00136	0.010									J
Thallium	0.00532	0.0050									
Zinc	ND	0.050									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3818	0.015	0.25	0	153	75	125	0	0		S
Barium	0.7309	0.050	0.5	0.2486	96.5	75	125	0	0		

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153666**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Beryllium	0.4595	0.0050	0.5	0	91.9	75	125	0	0		
Boron	0.5382	0.20	0.5	0.07279	93.1	75	125	0	0		*
Cadmium	0.4657	0.0050	0.5	0.00168	92.8	75	125	0	0		
Chromium	0.4769	0.010	0.5	0	95.4	75	125	0	0		
Iron	8.144	0.25	2	6.457	84.4	75	125	0	0		
Lead	0.5213	0.0050	0.5	0.0039	103	75	125	0	0		
Manganese	2.325	0.010	0.5	1.963	72.4	75	125	0	0		S
Nickel	0.4481	0.020	0.5	0.02373	84.9	75	125	0	0		
Selenium	0.5055	0.010	0.5	0	101	75	125	0	0		
Silver	0.1895	0.010	0.2	0	94.8	75	125	0	0		
Zinc	0.379	0.050	0.5	0	75.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-002AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153684**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3956	0.015	0.25	0	158	75	125	0	0		S
Barium	0.696	0.050	0.5	0.2229	94.6	75	125	0	0		
Beryllium	0.4479	0.0050	0.5	0.00138	89.3	75	125	0	0		
Boron	0.5084	0.20	0.5	0.07339	87	75	125	0	0		*
Cadmium	0.4504	0.0050	0.5	0	90.1	75	125	0	0		
Chromium	0.4579	0.010	0.5	0.00555	90.5	75	125	0	0		
Cobalt	0.4391	0.010	0.5	0	87.8	75	125	0	0		
Iron	3.131	0.25	2	1.601	76.5	75	125	0	0		
Lead	0.4866	0.0050	0.5	0.00443	96.4	75	125	0	0		
Manganese	0.5423	0.010	0.5	0.1063	87.2	75	125	0	0		
Nickel	0.4152	0.020	0.5	0.00456	82.1	75	125	0	0		
Selenium	0.4716	0.010	0.5	0	94.3	75	125	0	0		
Silver	0.1838	0.010	0.2	0	91.9	75	125	0	0		
Thallium	0.4604	0.0050	0.5	0	92.1	75	125	0	0		
Zinc	0.3813	0.050	0.5	0	76.3	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154070**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4886	0.010	0.5	0.01341	95	75	125	0	0		
Thallium	0.5081	0.0050	0.5	0	102	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3877	0.015	0.25	0	155	75	125	0.3818	1.53	20	S
Barium	0.7407	0.050	0.5	0.2486	98.4	75	125	0.7309	1.33	20	
Beryllium	0.458	0.0050	0.5	0	91.6	75	125	0.4595	0.327	20	
Boron	0.5514	0.20	0.5	0.07279	95.7	75	125	0.5382	2.42	20	*
Cadmium	0.4794	0.0050	0.5	0.00168	95.5	75	125	0.4657	2.90	20	
Chromium	0.49	0.010	0.5	0	98	75	125	0.4769	2.71	20	
Iron	8.216	0.25	2	6.457	88	75	125	8.144	0.880	20	
Lead	0.5285	0.0050	0.5	0.0039	105	75	125	0.5213	1.37	20	

Qualifiers:
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R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153667**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	2.369	0.010	0.5	1.963	81.2	75	125	2.325	1.87	20	
Nickel	0.4567	0.020	0.5	0.02373	86.6	75	125	0.4481	1.90	20	
Selenium	0.5075	0.010	0.5	0	102	75	125	0.5055	0.395	20	
Silver	0.1933	0.010	0.2	0	96.7	75	125	0.1895	1.99	20	
Zinc	0.3905	0.050	0.5	0	78.1	75	125	0.379	2.99	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/4/2015**	**12/7/2015**	**ICPMS_151207A**	**3154071**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cobalt	0.4877	0.010	0.5	0.01341	94.9	75	125	0.4886	0.184	20	
Thallium	0.5063	0.0050	0.5	0	101	75	125	0.5081	0.355	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW3 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153661**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.00191	0.0060									J
Barium	ND	0.0040									
Beryllium	0.00045	0.0020									J
Boron	ND	0.080									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	0.02087	0.10									J
Lead	0.00037	0.0020									J
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	0.00291	0.0040									J
Silver	0.00054	0.0040									J
Thallium	ND	0.0020									
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153662**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3925	0.0060	0.25	0.00191	156	80	120	0	0		S
Barium	0.4838	0.0040	0.5	0	96.8	80	120	0	0		
Beryllium	0.493	0.0020	0.5	0.00045	98.5	80	120	0	0		
Boron	0.4585	0.080	0.5	0	91.7	80	120	0	0		
Cadmium	0.5143	0.0020	0.5	0	103	80	120	0	0		
Chromium	0.4788	0.0040	0.5	0	95.8	80	120	0	0		
Cobalt	0.4756	0.0040	0.5	0	95.1	80	120	0	0		
Iron	1.939	0.10	2	0.02087	95.9	80	120	0	0		
Lead	0.5226	0.0020	0.5	0.00037	104	80	120	0	0		
Manganese	0.4849	0.0040	0.5	0	97	80	120	0	0		
Nickel	0.46	0.0040	0.5	0	92	80	120	0	0		
Selenium	0.5162	0.0040	0.5	0.00291	103	80	120	0	0		
Silver	0.213	0.0040	0.2	0.00054	106	80	120	0	0		
Zinc	0.4505	0.020	0.5	0	90.1	80	120	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88826

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW3 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/10/2015**	**ICPMS_151210B**	**3157568**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Thallium	0.4924	0.010	0.5	0	98.5	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88885

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW1 12/8/15			50	0	0	50	1.000	12/8/2015	12/8/2015
ILCSW1 12/8/15			50	0	0	50	1.000	12/8/2015	12/8/2015
IMBSPLP 12/7/15			50	0	0	50	1.000	12/8/2015	12/8/2015
15080412-001B	Soil		50	0	0	50	1.000	12/8/2015	12/8/2015
15080412-001BMS	Soil		50	0	0	50	1.000	12/8/2015	12/8/2015
15120030-008B	Soil		50	0	0	50	1.000	12/8/2015	12/8/2015
IMBTA1 12/7/15			50	0	0	50	1.000	12/8/2015	12/8/2015
15080412-001BMSD	Soil		50	0	0	50	1.000	12/8/2015	12/8/2015
15120194-001B	Soil		50	0	0	50	1.000	12/8/2015	12/8/2015
15120194-002B	Soil		50	0	0	50	1.000	12/8/2015	12/8/2015
15120207-002A	Solid		50	0	0	50	1.000	12/8/2015	12/8/2015
15120207-004A	Solid		50	0	0	50	1.000	12/8/2015	12/8/2015
15120208-002A	Solid		50	0	0	50	1.000	12/8/2015	12/8/2015
15120208-004A	Solid		50	0	0	50	1.000	12/8/2015	12/8/2015
IMBTA1 12/8/15			50	0	0	50	1.000	12/9/2015	12/9/2015
15120069-001B	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120259-007A	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120259-007AMS	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120263-001B	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120264-001A	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120264-002A	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120267-001B	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120197-001A	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120265-001B	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120265-002B	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
IMBSPLP 12/8/15			50	0	0	50	1.000	12/9/2015	12/9/2015
15120077-003A	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015
15120077-003AMS	Soil		50	0	0	50	1.000	12/9/2015	12/9/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBSPLP 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1312/6020**	**12/9/2015**	**12/9/2015**	**ICPMS_151208B**	**3156460**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	ND	0.10									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120077-003AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1312/6020**	**12/9/2015**	**12/9/2015**	**ICPMS_151208B**	**3156465**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	8.855	0.10	2	7.155	85	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15080412-001BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/8/2015**	**12/8/2015**	**ICPMS_151208A**	**3155142**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3722	0.015	0.25	0	149	75	125	0	0		S
Barium	0.8134	0.050	0.5	0.3	103	75	125	0	0		
Beryllium	0.4621	0.0050	0.5	0.00111	92.2	75	125	0	0		
Boron	0.636	0.20	0.5	0.1775	91.7	75	125	0	0		*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88885

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15080412-001BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/8/2015**	**12/8/2015**	**ICPMS_151208A**	**3155142**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	0.4407	0.0050	0.5	0	88.1	75	125	0	0		
Chromium	0.4777	0.010	0.5	0.00175	95.2	75	125	0	0		
Cobalt	0.4462	0.010	0.5	0	89.2	75	125	0	0		
Iron	7.142	0.25	2	5.859	64.2	75	125	0	0		S
Lead	0.5006	0.0050	0.5	0.00339	99.4	75	125	0	0		
Manganese	0.7111	0.010	0.5	0.2771	86.8	75	125	0	0		
Nickel	0.4249	0.020	0.5	0.01662	81.7	75	125	0	0		
Selenium	0.4731	0.010	0.5	0	94.6	75	125	0	0		
Silver	0.1724	0.010	0.2	0	86.2	75	125	0	0		
Thallium	0.4911	0.0050	0.5	0.00096	98	75	125	0	0		
Zinc	0.3555	0.050	0.5	0	71.1	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120259-007AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/6020**	**12/9/2015**	**12/9/2015**	**ICPMS_151208B**	**3156449**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.4234	0.015	0.25	0	169	75	125	0	0		S
Barium	0.8515	0.010	0.5	0.2471	121	75	125	0	0		
Beryllium	0.5624	0.0050	0.5	0	112	75	125	0	0		
Boron	0.9468	0.10	0.5	0.4619	97	75	125	0	0		*
Cadmium	0.4771	0.0050	0.5	0	95.4	75	125	0	0		
Chromium	0.523	0.010	0.5	0.00111	104	75	125	0	0		
Cobalt	0.5276	0.010	0.5	0.02837	99.8	75	125	0	0		
Iron	10.33	0.25	2	9.408	46.1	75	125	0	0		S
Lead	0.7249	0.0050	0.5	0.1306	119	75	125	0	0		
Manganese	2.052	0.010	0.5	1.722	66	75	125	0	0		S
Nickel	0.4768	0.010	0.5	0.03672	88	75	125	0	0		
Selenium	0.4975	0.010	0.5	0	99.5	75	125	0	0		
Silver	0.1853	0.010	0.2	0.0004	92.4	75	125	0	0		
Thallium	0.6033	0.010	0.5	0.00103	120	75	125	0	0		
Zinc	0.6409	0.050	0.5	0.2937	69.4	75	125	0	0		S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15080412-001BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/8/2015**	**12/8/2015**	**ICPMS_151208A**	**3155143**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3743	0.015	0.25	0	150	75	125	0.3722	0.563	20	S
Barium	0.8145	0.050	0.5	0.3	103	75	125	0.8134	0.135	20	
Beryllium	0.4562	0.0050	0.5	0.00111	91	75	125	0.4621	1.28	20	
Boron	0.6295	0.20	0.5	0.1775	90.4	75	125	0.636	1.03	20	*
Cadmium	0.4436	0.0050	0.5	0	88.7	75	125	0.4407	0.656	20	
Chromium	0.4743	0.010	0.5	0.00175	94.5	75	125	0.4777	0.714	20	
Cobalt	0.452	0.010	0.5	0	90.4	75	125	0.4462	1.29	20	
Iron	7.096	0.25	2	5.859	61.9	75	125	7.142	0.646	20	S
Lead	0.4977	0.0050	0.5	0.00339	98.9	75	125	0.5006	0.581	20	
Manganese	0.7182	0.010	0.5	0.2771	88.2	75	125	0.7111	0.993	20	
Nickel	0.4302	0.020	0.5	0.01662	82.7	75	125	0.4249	1.24	20	
Selenium	0.4429	0.010	0.5	0	88.6	75	125	0.4731	6.59	20	
Silver	0.1714	0.010	0.2	0	85.7	75	125	0.1724	0.582	20	
Thallium	0.4918	0.0050	0.5	0.00096	98.2	75	125	0.4911	0.142	20	

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15080412-001BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/6020**	**12/8/2015**	**12/8/2015**	**ICPMS_151208A**	**3155143**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	0.349	0.050	0.5	0	69.8	75	125	0.3555	1.85	20	S

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW1 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/8/2015**	**12/8/2015**	**ICPMS_151208A**	**3155136**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	ND	0.0060									
Barium	ND	0.0040									
Cadmium	ND	0.0020									
Chromium	ND	0.0040									
Cobalt	ND	0.0040									
Iron	0.07476	0.10									J
Lead	0.00064	0.0020									J
Manganese	ND	0.0040									
Nickel	ND	0.0040									
Selenium	ND	0.0040									
Silver	ND	0.0040									
Thallium	ND	0.0020									
Zinc	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW1 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/8/2015**	**12/11/2015**	**ICPMS-3_151211A**	**3158576**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020									
Boron	ND	0.080									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW1 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/8/2015**	**12/8/2015**	**ICPMS_151208A**	**3155137**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Antimony	0.3821	0.0060	0.25	0	153	80	120	0	0		S
Barium	0.5176	0.0040	0.5	0	104	80	120	0	0		
Beryllium	0.4516	0.0020	0.5	0.00024	90.3	80	120	0	0		
Boron	0.4604	0.080	0.5	0	92.1	80	120	0	0		
Cadmium	0.5191	0.0020	0.5	0	104	80	120	0	0		
Chromium	0.5241	0.0040	0.5	0	105	80	120	0	0		
Cobalt	0.507	0.0040	0.5	0	101	80	120	0	0		
Lead	0.5141	0.0020	0.5	0.00064	103	80	120	0	0		
Manganese	0.5159	0.0040	0.5	0	103	80	120	0	0		
Nickel	0.4956	0.0040	0.5	0	99.1	80	120	0	0		
Selenium	0.5043	0.0040	0.5	0	101	80	120	0	0		
Silver	0.2104	0.0040	0.2	0	105	80	120	0	0		
Thallium	0.5001	0.0020	0.5	0	100	80	120	0	0		
Zinc	0.4642	0.020	0.5	0	92.8	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW1 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/8/2015**	**12/10/2015**	**ICPMS_151210B**	**3157565**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Iron	1.906	0.50	2	0.07476	91.6	80	120	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88823

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBW2 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
ILCSW2 12/4/15			50	0	0	50	1.000	12/4/2015	12/4/2015
IMBSPLP 12/3/15			50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120065-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120067-005B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-001B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-004B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002BMS	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120068-002BMSD	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-002B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015
15120069-003B	Soil		50	0	0	50	1.000	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBSPLP 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153640**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-002BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153643**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.5202	0.0040	0.5	0.0412	95.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-002BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1312/6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153644**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.5162	0.0040	0.5	0.0412	95	75	125	0.5202	0.772	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
IMBW2 12/4/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153638**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	ND	0.0040									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
ILCSW2 12/4/15	**ZZZZZ**	**LCS**	**mg/L**	**SW6020**	**12/4/2015**	**12/5/2015**	**ICPMS_151204B**	**3153639**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Manganese	0.4865	0.0040	0.5	0	97.3	80	120	0	0		

Qualifiers:
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H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88800

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
HGLCSS1 12/3/15			0.3	0	0	30	100.000	12/3/2015	12/3/2015
15120065-001B	Soil		0.302	0	0	30	99.338	12/3/2015	12/3/2015
15120065-002B	Soil		0.346	0	0	30	86.705	12/3/2015	12/3/2015
15120067-001B	Soil		0.366	0	0	30	81.967	12/3/2015	12/3/2015
15120067-002B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120067-003B	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-003BMS	Soil		0.306	0	0	30	98.039	12/3/2015	12/3/2015
15120067-003BMSD	Soil		0.31	0	0	30	96.774	12/3/2015	12/3/2015
15120067-004B	Soil		0.358	0	0	30	83.799	12/3/2015	12/3/2015
15120067-005B	Soil		0.334	0	0	30	89.820	12/3/2015	12/3/2015
15120068-001B	Soil		0.336	0	0	30	89.286	12/3/2015	12/3/2015
15120068-002B	Soil		0.37	0	0	30	81.081	12/3/2015	12/3/2015
15120068-003B	Soil		0.307	0	0	30	97.720	12/3/2015	12/3/2015
15120068-004B	Soil		0.328	0	0	30	91.463	12/3/2015	12/3/2015
15120069-001B	Soil		0.332	0	0	30	90.361	12/3/2015	12/3/2015
15120069-002B	Soil		0.32	0	0	30	93.750	12/3/2015	12/3/2015
15120069-003B	Soil		0.351	0	0	30	85.470	12/3/2015	12/3/2015
15120106-001B	Soil		0.313	0	0	30	95.847	12/4/2015	12/4/2015
15120107-001B	Soil		0.331	0	0	30	90.634	12/4/2015	12/4/2015
15120109-001B	Soil		0.33	0	0	30	90.909	12/4/2015	12/4/2015
15120109-002B	Soil		0.308	0	0	30	97.403	12/4/2015	12/4/2015
15120109-003B	Soil		0.344	0	0	30	87.209	12/4/2015	12/4/2015
15120109-004B	Soil		0.319	0	0	30	94.044	12/4/2015	12/4/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBS1 12/3/15	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152165**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSS1 12/3/15	**ZZZZZ**	**LCS**	**mg/Kg**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152166**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.25	0.020	0.25	0	100	80	120	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152172**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.3214	0.023	0.287	0.02606	103	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW7471A**	**12/3/2015**	**12/3/2015**	**CETAC 2_151203D**	**3152173**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.2946	0.022	0.2833	0.02606	94.8	75	125	0.3214	8.70	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW2 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120065-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120068-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120069-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120067-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTB 12/3/15			30	0	0	30	1.000	12/8/2015	12/8/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120067-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156540**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0026	0.00020	0.0025	0	104	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMS	**2635-28-B03 (0-4)**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156551**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0029	0.00020	0.0025	0	116	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120069-003BMSD	**2635-28-B03 (0-4)**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156552**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0029	3.51	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW2 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156532**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/3/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156534**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88922

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW2 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209A**	**3156533**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Metals
BatchID: 88923

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGLCSW3 12/8/15			30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/4/15			30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-002B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-003B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-004B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120094-005B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120095-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120097-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120100-001B	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMS	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
15120093-003BMSD	Soil		30	0	0	30	1.000	12/8/2015	12/8/2015
HGMBTA1 12/8/15			30	0	0	30	1.000	12/9/2015	12/9/2015
15120263-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120267-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120069-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-001A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002A	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMSO	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120197-001A			30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-001B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120265-002B	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120264-002AMS	Soil		30	0	0	30	1.000	12/9/2015	12/9/2015
15120156-005B	Aqueous		5	0	0	30	6.000	12/9/2015	12/9/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBTA1 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW1311/7470A**	**12/9/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156384**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.00009	0.00020									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156400**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0027	0.00020	0.0025	0	108	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120264-002AMS	**ZZZZZ**	**MS**	**mg/L**	**SW1311/7470A**	**12/9/2015**	**12/9/2015**	**CETAC 2_151209C**	**3156799**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0025	0.00020	0.0025	0.00008	96.8	75	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120093-003BMSD	**ZZZZZ**	**MSD**	**mg/L**	**SW1311/7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156401**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0028	0.00020	0.0025	0	112	75	125	0.0027	3.64	20	

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGMBW3 12/8/15	**ZZZZZ**	**MBLK**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156382**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	ND	0.00020									

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
HGLCSW3 12/8/15	**ZZZZZ**	**LCS**	**mg/L**	**SW7470A**	**12/8/2015**	**12/9/2015**	**CETAC 2_151209B**	**3156383**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.0025	0.00020	0.0025	0	100	85	115	0	0		

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: 88788

PREP BATCH SUMMARY

Sample ID	Matrix	pH	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
TCNMBS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
TCNLCSS1 120315			1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMS	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15110805-001BMSD	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120065-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120069-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120068-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-005B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120064-006B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-001B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-002B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-003B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015
15120067-004B	Soil		1	0	0	50	50.000	12/3/2015	12/3/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNMBS1 120315	**ZZZZZ**	**MBLK**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151856**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	0.1433	0.25									J

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
TCNLCSS1 120315	**ZZZZZ**	**LCS**	**mg/Kg**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151857**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.43	0.25	10	0.1433	103	90	110	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMS	**ZZZZZ**	**MS**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151869**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	9.369	0.26	10.43	0.2084	87.8	75	125	0	0		

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15110805-001BMSD	**ZZZZZ**	**MSD**	**mg/Kg-dry**	**SW9012A**	**12/3/2015**	**12/3/2015**	**LACHAT_151203E**	**3151860**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cyanide	10.37	0.26	10.43	0.2084	97.4	75	125	9.369	10.1	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116638

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3152127	15120051-001A	SAMP	PH_S	R116638	1	12/03/2015
3152128	15120051-004A	SAMP	PH_S	R116638	1	12/03/2015
3152129	15120051-007B	SAMP	PH_S	R116638	1	12/03/2015
3152130	15120051-009B	SAMP	PH_S	R116638	1	12/03/2015
3152131	15120051-011B	SAMP	PH_S	R116638	1	12/03/2015
3152132	15120051-013B	SAMP	PH_S	R116638	1	12/03/2015
3152133	15120051-014A	SAMP	PH_S	R116638	1	12/03/2015
3152134	15120051-015B	SAMP	PH_S	R116638	1	12/03/2015
3152135	15120051-016B	SAMP	PH_S	R116638	1	12/03/2015
3152136	15120051-017B	SAMP	PH_S	R116638	1	12/03/2015
3152137	15120065-001B	SAMP	PH_S	R116638	1	12/03/2015
3152138	15120065-002B	SAMP	PH_S	R116638	1	12/03/2015
3152139	15120068-001B	SAMP	PH_S	R116638	1	12/03/2015
3152140	15120068-001BDUP	DUP	PH_S	R116638	1	12/03/2015
3152141	15120068-002B	SAMP	PH_S	R116638	1	12/03/2015
3152142	15120068-003B	SAMP	PH_S	R116638	1	12/03/2015
3152143	15120068-004B	SAMP	PH_S	R116638	1	12/03/2015
3152144	15120069-001B	SAMP	PH_S	R116638	1	12/03/2015
3152145	15120069-002B	SAMP	PH_S	R116638	1	12/03/2015
3152146	15120069-003B	SAMP	PH_S	R116638	1	12/03/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120068-001BDUP	**ZZZZZ**	**DUP**	**pH Units**	**SW9045C**	**12/3/2015**	**12/3/2015**	**PH_151203A**	**3152140**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
pH	7.74	0	0	0	0	0	0	7.73	0.129	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT
Wet Chemistry
BatchID: R116611

ANALYTICAL RUN SUMMARY

SeqNo	Sample ID	Type	Test Code	Batch	DF	Date Analyzed
3151520	PMMBLK5 12/2/15	MBLK	PMOIST	R116611	1	12/03/2015
3151521	PMLCS-S5 12/2/15	LCS	PMOIST	R116611	1	12/03/2015
3151522	PMLCS-W5 12/2/15	LCS	PMOIST	R116611	1	12/03/2015
3151523	15120056-001B	SAMP	PMOIST	R116611	1	12/03/2015
3151524	15120056-002B	SAMP	PMOIST	R116611	1	12/03/2015
3151525	15120064-001B	SAMP	PMOIST	R116611	1	12/03/2015
3151526	15120064-001BDUP	DUP	PMOIST	R116611	1	12/03/2015
3151527	15120064-002B	SAMP	PMOIST	R116611	1	12/03/2015
3151528	15120064-003B	SAMP	PMOIST	R116611	1	12/03/2015
3151529	15120064-004B	SAMP	PMOIST	R116611	1	12/03/2015
3151530	15120064-005B	SAMP	PMOIST	R116611	1	12/03/2015
3151531	15120064-006B	SAMP	PMOIST	R116611	1	12/03/2015
3152395	15120067-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152396	15120067-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152397	15120067-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152398	15120067-004B	SAMP	PMOIST	R116611	1	12/04/2015
3152399	15120067-005B	SAMP	PMOIST	R116611	1	12/04/2015
3152400	15120068-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152401	15120068-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152402	15120068-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152403	15120068-004B	SAMP	PMOIST	R116611	1	12/04/2015
3152404	15120069-001B	SAMP	PMOIST	R116611	1	12/04/2015
3152405	15120069-002B	SAMP	PMOIST	R116611	1	12/04/2015
3152406	15120069-003B	SAMP	PMOIST	R116611	1	12/04/2015
3152491	15120067-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152492	15120067-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152493	15120067-003B	SAMP	PSOLID	R116611	1	12/04/2015
3152494	15120067-004B	SAMP	PSOLID	R116611	1	12/04/2015
3152495	15120067-005B	SAMP	PSOLID	R116611	1	12/04/2015
3152496	15120068-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152497	15120068-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152498	15120068-003B	SAMP	PSOLID	R116611	1	12/04/2015
3152499	15120068-004B	SAMP	PSOLID	R116611	1	12/04/2015
3152500	15120069-001B	SAMP	PSOLID	R116611	1	12/04/2015
3152501	15120069-002B	SAMP	PSOLID	R116611	1	12/04/2015
3152502	15120069-003B	SAMP	PSOLID	R116611	1	12/04/2015

QC SUMMARY

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMMBLK5 12/2/15	**ZZZZZ**	**MBLK**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151520**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	ND	0.200									*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-S5 12/2/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151521**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	4.38	0.200	5	0	87.6	80	120	0	0		*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range

CLIENT: Ecology & Environment, Inc.
Work Order: 15120069
Project: 1009341.0002.01, IL 38, DuPage County, IL

ANALYTICAL QC SUMMARY REPORT

Wet Chemistry

BatchID: R116611

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
PMLCS-W5 12/2/15	**ZZZZZ**	**LCS**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151522**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	99.82	0.200	99.8	0	100	80	120	0	0		*

Sample ID:	Customer ID:	SampType:	Units:	TestNo:	Prep Date:	Analysis Date:	Run ID:	SeqNo:
15120064-001BDUP	**ZZZZZ**	**DUP**	**wt%**	**D2974**	**12/2/2015**	**12/3/2015**	**BALANCE_151202E**	**3151526**

Analyte	Result	PQL	SPK value	SPK Ref Val	% REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Percent Moisture	17.72	0.200	0	0	0	0	0	19.16	7.81	20	*

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Non Accredited Parameter
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded
B - Analyte detected in the associated Method Blank
E - Value above quantitation range