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Uncontaminated Soil Certification Forms

Route: FAI-94 at Montrose Avenue
Section: 267-0101.3-B-R
County: Cook
Contract No.: 62F95

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

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: FAI 94 (I-94) at Montrose Ave Office Phone Number, if available:

Physical Site Location (address, including number and street):
I-90/I-94 interchange with Montrose Avenue (ISGS #2787V-30)

City: Chicago State: IL Zip Code: 60641

County: Cook Township: NA

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

Latitude: 41.96059 (Decimal Degrees) Longitude: -87.74255 (-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:

Approximate Start Date (mm/dd/yyyy): Approximate End Date (mm/dd/yyyy):

Estimated Volume of debris (cu. Yd.):

II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation
Street Address: 201 West Center Court
PO Box:
City: Schaumburg State: IL
Zip Code: 60196-1096 Phone: 847-705-4122
Contact: Irma Romiti-Johnson
Email, if available: Irma.Romiti-Johnson@illinois.gov

Site Operator

Name: Illinois Department of Transportation
Street Address: 201 West Center Court
PO Box:
City: Schaumburg State: IL
Zip Code: 60196-1096 Phone: 847-705-4122
Contact: Irma Romiti-Johnson
Email, if available: Irma.Romiti-Johnson@illinois.gov

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

Route: FAI-94 at Montrose Avenue
Section: 267-0101.3-B-R
County: Cook
Contract No.: 62F95

Project Name: FAI 94 (I-94) at Montrose Ave Latitude: 41.96059 Longitude: -87.74255

Uncontaminated Soil 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 2787V-30-B03 was sampled within the construction zone adjacent to ISGS #2787V-30 (ROW). Refer to PSI Report for ISGS #2787V-30 (ROW) including Table 4-3, and Figures 4-1 and 4-2.

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

See attached data summary table and associated laboratory data package J165362-1.

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

I, Neil 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

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

7/30/2019
Date:

P.E or L.P.G

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

Analytical Data Summary
PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-229-18; WorkOrder #50

Key to Data Tables

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

Criteria Qualifiers and Shading

\# = pH is less than 6.25 or greater than 9.0 standard units.
** = Headspace reading above background (outside of instrument margin of error).
† = 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.
r = Concentration exceeds a TACO Tier 1 soil RO for residential properties.
L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
= Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
= Concentration exceeds the most stringent MAC and the MAC for Chicago corporate limits.
= Concentration exceeds applicable comparison criteria.

Route: FAI-94 at Montrose Avenue
Section: 267-0101.3-B-R
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PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-229-18; WorkOrder #50A

CONTAMINANTS OF CONCERN

SITE	ISGS #2787V-30 (2787-32) (ROW)			Comparison Criteria					
BORING	2787V-30-B03			MACs			TACO		
SAMPLE	2787V-30-B03 (0-4)	2787V-30-B03 (0-4)D	2787V-30-B03 (4-8)						
MATRIX	Soil	Soil	Soil						
DEPTH (feet)	0-4	0-4	4-8						
pH	8.0	7.9	7.9						
PID > Bkgd.	--			Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
VOCs (mg/kg)									
Acetone	**0.014 J**	ND U	ND U	25	--	--	70,000	100,000	--
SVOCs (mg/kg)									
2-Methylnaphthalene	**0.096**	**0.11**	ND U	--	--	--	--	--	--
Acenaphthene	**0.011 J**	ND U	ND U	570	--	--	4,700	120,000	--
Benzo(a)pyrene	**0.017 J**	ND U	ND U	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	**0.020 J**	ND U	ND U	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	**0.021 J**	**0.017 J**	ND U	--	--	--	--	--	--
Benzo(k)fluoranthene	**0.018 J**	ND U	ND U	9	--	--	9	1,700	--
Chrysene	**0.037 J**	**0.031 J**	**0.066**	88	--	--	88	17,000	--
Fluoranthene	**0.028 J**	**0.012 J**	**0.013 J**	3,100	--	--	3,100	82,000	--
Fluorene	ND U	ND U	**0.041**	560	--	--	3,100	82,000	--
Naphthalene	**0.020 J**	**0.029 J**	ND U	1.8	--	--	170	1.8	--
Phenanthrene	**0.097**	**0.098**	**0.044**	--	--	--	--	--	--
Pyrene	**0.035 J**	**0.019 J**	**0.023 J**	2,300	--	--	2,300	61,000	--
Inorganics (mg/kg)									
Antimony	**0.58 J**	**0.51 J**	**0.34 J**	5	--	--	31	82	--
Arsenic	**7.6**	**6.4**	**6.5**	11.3	13	--	13	61	--
Barium	**33**	**39**	**16**	1,500	--	--	5,500	14,000	--
Beryllium	**0.73**	**0.74**	**0.37**	22	--	--	160	410	--
Boron	**18**	**19**	**10**	40	--	--	16,000	41,000	--
Cadmium	ND U	ND U	**0.36**	5.2	--	--	78	200	--
Calcium	**52,000**	**52,000**	**100,000**	--	--	--	--	--	--
Chromium	**17**	**17**	**6.2**	21	--	--	230	690	--
Cobalt	**13**	**11**	**9.9**	20	--	--	4,700	12,000	--
Copper	**23**	**23**	**27**	2,900	--	--	2,900	8,200	--
Iron	**18,000 †m**	**18,000 †m**	**14,000**	15,000	15,900	--	--	--	--
Lead	**15**	**13**	**13**	107	--	--	400	700	--
Magnesium	**25,000**	**24,000**	**61,000**	325,000	--	--	--	730,000	--
Manganese	**370**	**300**	**840 †m**	630	636	--	1,600	4,100	--
Mercury	**0.018 J**	**0.017 J**	**0.015 J**	0.89	--	--	10	0.1	--
Nickel	**36**	**32**	**23**	100	--	--	1,600	4,100	--
Potassium	**3,500**	**3,700**	**1,700**	--	--	--	--	--	--
Selenium	**0.56 J**	**0.36 J**	**0.42 J**	1.3	--	--	390	1,000	--
Silver	**2.6**	**2.5**	**0.59**	4.4	--	--	390	1,000	--
Sodium	**280**	**280**	**240**	--	--	--	--	--	--
Thallium	**1.1**	**0.87**	ND U	2.6	--	--	6.3	160	--
Vanadium	**20**	**21**	**9.0**	550	--	--	550	1,400	--
Zinc	**62**	**53**	**100**	5,100	--	--	23,000	61,000	--
TCLP Metals (mg/L)									
Barium	**0.38 J**	**0.30 J**	**0.15 J**	--	--	--	--	--	2
Boron	**0.15 J**	**0.14 J**	**0.095 J**	--	--	--	--	--	2
Cadmium	ND U	ND U	ND U	--	--	--	--	--	0.005
Cobalt	**0.033**	**0.041**	**0.038**	--	--	--	--	--	1
Iron	ND U	ND U	ND U	--	--	--	--	--	5
Manganese	**2.4 L**	**2.2 L**	**2.6 L**	--	--	--	--	--	0.15
Nickel	**0.053**	**0.066**	**0.072**	--	--	--	--	--	0.1
Zinc	**0.27 J**	ND U	**0.58**	--	--	--	--	--	5
SPLP Metals (mg/L)									
Manganese	**0.036**	**0.011 J**	ND U	--	--	--	--	--	0.15

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 500-165362-1
Client Project/Site: IDOT - 176-001-WO 50

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

Attn: Mr. Dean Tiebout

Authorized for release by:
7/3/2019 8:16:01 AM

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

Table of Contents

Case Narrative

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Job ID: 500-165362-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-165362-1

Receipt
The samples were received on 6/19/2019 2:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 9.8º C.

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

GC/MS Semi VOA
Method(s) 8270D: Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for 3 analytes to recover outside criteria for this method when utilizing this list of analytes. The LCS associated with batch 492507 had 1 analyte outside control limits: Carbazole. These results have been reported and qualified. (LCS 500-492507/2-A)

Method(s) 8270D: The following sample was diluted due to the abundance of target and non-target analytes: 2787V-30-B04 (0-0.75) (500-165362-5). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following matrix spike/matrix spike duplicate (MS/MSD) recovered at 0% for one or more analytes. Data has been qualified and reported. (500-165362-E-1-G MS) and (500-165362-E-1-H MSD)

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

Metals
Method(s) 6010B: The method blank for preparation batch 500-491462 and analytical batch 500-491810 contained Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The method blank for preparation batch 500-491462 and analytical batch 500-491959 contained Magnesium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6020A: The continuing calibration verification (CCV) at line 117, associated with batch 500-492835 recovered above the upper control limit for Thallium. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

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

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

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

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4) — Lab Sample ID: 500-165362-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.014	J	0.019	0.0082	mg/Kg	1	☼	8260B	Total/NA
Naphthalene	0.020	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.096		0.077	0.0071	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.011	J	0.038	0.0069	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.097		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.028	J	0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.035	J	0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.037	J	0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.020	J	0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.018	J	0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.017	J	0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.021	J	0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.58	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	7.6		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	33	B	0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.73		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Boron	18		2.9	0.27	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.17	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4) (Continued) — Lab Sample ID: 500-165362-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	52000	B	57	9.7	mg/Kg	5	☼	6010B	Total/NA
Chromium	17		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	13		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	23		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	18000	B	11	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	15		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000	B	5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	370	B	0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	36		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	3500		29	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.56	J	0.57	0.34	mg/Kg	1	☼	6010B	Total/NA
Silver	2.6		0.29	0.074	mg/Kg	1	☼	6010B	Total/NA
Sodium	280		57	8.5	mg/Kg	1	☼	6010B	Total/NA
Thallium	1.1		0.57	0.29	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	62		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.15	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.033		0.025	0.010	mg/L	1		6010B	TCLP
Manganese	2.4		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.053		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.27	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.036		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.018	J	0.019	0.0064	mg/Kg	1	☼	7471B	Total/NA
pH	8.0		0.2	0.2	SU	1		9045D	Total/NA

Client Sample ID: 2787V-30-B03 (0-4)D — Lab Sample ID: 500-165362-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.029	J	0.038	0.0058	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.11		0.076	0.0070	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.098		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.012	J	0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.019	J	0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.031	J	0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.017	J	0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.51	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.4		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	39	B	0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.74		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	19		2.8	0.26	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Calcium	52000	B	56	9.5	mg/Kg	5	☼	6010B	Total/NA
Chromium	17		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	23		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	18000	B	11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	13		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000	B	5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	300	B	0.56	0.081	mg/Kg	1	☼	6010B	Total/NA
Nickel	32		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)D (Continued) — Lab Sample ID: 500-165362-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	3700		28	9.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.36	J	0.56	0.33	mg/Kg	1	☼	6010B	Total/NA
Silver	2.5		0.28	0.072	mg/Kg	1	☼	6010B	Total/NA
Sodium	280		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Thallium	0.87		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	53		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Barium	0.30	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.14	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.041		0.025	0.010	mg/L	1		6010B	TCLP
Manganese	2.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.066		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.080	J B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.011	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.017	J	0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA
pH	7.9		0.2	0.2	SU	1		9045D	Total/NA

Client Sample ID: 2787V-30-B03 (4-8) — Lab Sample ID: 500-165362-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.041		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.044		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.013	J	0.037	0.0068	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.023	J	0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.066		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.34	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.5		0.51	0.17	mg/Kg	1	☼	6010B	Total/NA
Barium	16	B	0.51	0.058	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.37		0.20	0.047	mg/Kg	1	☼	6010B	Total/NA
Boron	10		2.5	0.24	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.36	B	0.10	0.018	mg/Kg	1	☼	6010B	Total/NA
Calcium	100000	B	51	8.6	mg/Kg	5	☼	6010B	Total/NA
Chromium	6.2		0.51	0.25	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.9		0.25	0.066	mg/Kg	1	☼	6010B	Total/NA
Copper	27		0.51	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B	10	5.3	mg/Kg	1	☼	6010B	Total/NA
Lead	13		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	61000	B	25	13	mg/Kg	5	☼	6010B	Total/NA
Manganese	840	B	0.51	0.073	mg/Kg	1	☼	6010B	Total/NA
Nickel	23		0.51	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	1700		25	9.0	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.42	J	0.51	0.30	mg/Kg	1	☼	6010B	Total/NA
Silver	0.59		0.25	0.065	mg/Kg	1	☼	6010B	Total/NA
Sodium	240		51	7.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.0		0.25	0.060	mg/Kg	1	☼	6010B	Total/NA
Zinc	100		1.0	0.44	mg/Kg	1	☼	6010B	Total/NA
Barium	0.15	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.095	J	0.50	0.050	mg/L	1		6010B	TCLP
Cobalt	0.038		0.025	0.010	mg/L	1		6010B	TCLP
Manganese	2.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.072		0.025	0.010	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (4-8) (Continued) — Lab Sample ID: 500-165362-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	0.58	B	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.015	J	0.017	0.0057	mg/Kg	1		7471B	Total/NA
pH	7.9		0.2	0.2	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-165362-6	2787V-30-B03 (0-4)	Solid	06/19/19 12:25	06/19/19 14:05	
500-165362-7	2787V-30-B03 (0-4)D	Solid	06/19/19 12:27	06/19/19 14:05	
500-165362-8	2787V-30-B03 (4-8)	Solid	06/19/19 12:35	06/19/19 14:05	

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)
Date Collected: 06/19/19 12:25
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-6
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**0.014**	**J**	0.019	0.0082	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Benzene	<0.0019		0.0019	0.00048	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Bromodichloromethane	<0.0019		0.0019	0.00038	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Bromoform	<0.0019		0.0019	0.00055	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Bromomethane	<0.0047		0.0047	0.0018	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
2-Butanone (MEK)	<0.0047		0.0047	0.0021	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Carbon disulfide	<0.0047		0.0047	0.00098	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Carbon tetrachloride	<0.0019		0.0019	0.00054	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Chlorobenzene	<0.0019		0.0019	0.00069	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Chloroethane	<0.0047		0.0047	0.0014	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Chloroform	<0.0019		0.0019	0.00065	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Chloromethane	<0.0047		0.0047	0.0019	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00052	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00057	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Dibromochloromethane	<0.0019		0.0019	0.00061	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,1-Dichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,2-Dichloroethane	<0.0047		0.0047	0.0015	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,1-Dichloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,2-Dichloropropane	<0.0019		0.0019	0.00048	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,3-Dichloropropene, Total	<0.0019		0.0019	0.00066	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Ethylbenzene	<0.0019		0.0019	0.00090	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Methylene Chloride	<0.0047		0.0047	0.0018	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.0014	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00055	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Styrene	<0.0019		0.0019	0.00057	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00060	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Tetrachloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Toluene	<0.0019		0.0019	0.00047	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00083	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00066	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00063	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00080	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Trichloroethene	<0.0019		0.0019	0.00063	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Vinyl acetate	<0.0047		0.0047	0.0016	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Vinyl chloride	<0.0019		0.0019	0.00083	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1
Xylenes, Total	<0.0038		0.0038	0.00060	mg/Kg	☼	06/19/19 17:37	06/26/19 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*75 - 131*	*06/19/19 17:37*	*06/26/19 17:19*	*1*
Dibromofluoromethane	*109*		*75 - 126*	*06/19/19 17:37*	*06/26/19 17:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 134*	*06/19/19 17:37*	*06/26/19 17:19*	*1*
Toluene-d8 (Surr)	*98*		*75 - 124*	*06/19/19 17:37*	*06/26/19 17:19*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.085	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)
Date Collected: 06/19/19 12:25
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-6
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Naphthalene	**0.020**	**J**	0.038	0.0059	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2-Methylnaphthalene	**0.096**		0.077	0.0071	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,4-Dinitrophenol	<0.77		0.77	0.68	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Acenaphthene	**0.011**	**J**	0.038	0.0069	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4-Nitrophenol	<0.77		0.77	0.37	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Hexachlorobenzene	<0.077		0.077	0.0089	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Pentachlorophenol	<0.77		0.77	0.62	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Phenanthrene	**0.097**		0.038	0.0053	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Anthracene	<0.038		0.038	0.0064	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Carbazole	<0.19	*	0.19	0.096	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Fluoranthene	**0.028**	**J**	0.038	0.0071	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Pyrene	**0.035**	**J**	0.038	0.0076	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1
Benzo[a]anthracene	<0.038		0.038	0.0052	mg/Kg	☼	06/28/19 08:10	06/29/19 17:20	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)
Date Collected: 06/19/19 12:25
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-6
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.037**	**J**	0.038	0.010	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Benzo[b]fluoranthene	**0.020**	**J**	0.038	0.0083	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Benzo[k]fluoranthene	**0.018**	**J**	0.038	0.011	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Benzo[a]pyrene	**0.017**	**J**	0.038	0.0074	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Indeno[1,2,3-cd]pyrene	<0.038		0.038	0.0099	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
Benzo[g,h,i]perylene	**0.021**	**J**	0.038	0.012	mg/Kg		06/28/19 08:10	06/29/19 17:20	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg		06/28/19 08:10	06/29/19 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*99*		*31 - 166*	*06/28/19 08:10*	*06/29/19 17:20*	*1*
Phenol-d5	*105*		*30 - 153*	*06/28/19 08:10*	*06/29/19 17:20*	*1*
Nitrobenzene-d5	*89*		*37 - 147*	*06/28/19 08:10*	*06/29/19 17:20*	*1*
2-Fluorobiphenyl	*85*		*43 - 145*	*06/28/19 08:10*	*06/29/19 17:20*	*1*
2,4,6-Tribromophenol	*89*		*31 - 143*	*06/28/19 08:10*	*06/29/19 17:20*	*1*
Terphenyl-d14	*94*		*42 - 157*	*06/28/19 08:10*	*06/29/19 17:20*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.58**	**J**	1.1	0.22	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Arsenic	**7.6**		0.57	0.20	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Barium	**33**	**B**	0.57	0.065	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Beryllium	**0.73**		0.23	0.054	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Boron	**18**		2.9	0.27	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Cadmium	**0.17**	**B**	0.11	0.021	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Calcium	**52000**	**B**	57	9.7	mg/Kg		06/21/19 16:35	06/25/19 12:22	5
Chromium	**17**		0.57	0.28	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Cobalt	**13**		0.29	0.075	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Copper	**23**		0.57	0.16	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Iron	**18000**	**B**	11	6.0	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Lead	**15**		0.29	0.13	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Magnesium	**25000**	**B**	5.7	2.8	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Manganese	**370**	**B**	0.57	0.083	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Nickel	**36**		0.57	0.17	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Potassium	**3500**		29	10	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Selenium	**0.56**	**J**	0.57	0.34	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Silver	**2.6**		0.29	0.074	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Sodium	**280**		57	8.5	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Thallium	**1.1**		0.57	0.29	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Vanadium	**20**		0.29	0.068	mg/Kg		06/21/19 16:35	06/25/19 03:04	1
Zinc	**62**		1.1	0.50	mg/Kg		06/21/19 16:35	06/25/19 03:04	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.38**	**J**	0.50	0.050	mg/L		06/27/19 14:52	06/28/19 15:02	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		06/27/19 14:52	06/28/19 15:02	1
Boron	**0.15**	**J**	0.50	0.050	mg/L		06/27/19 14:52	06/28/19 15:02	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)
Date Collected: 06/19/19 12:25
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-6
Matrix: Solid
Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		06/27/19 14:52	06/28/19 15:02	1
Chromium	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:02	1
Cobalt	**0.033**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:02	1
Iron	<0.40		0.40	0.20	mg/L		06/27/19 14:52	06/28/19 15:02	1
Lead	<0.0075		0.0075	0.0075	mg/L		06/27/19 14:52	06/28/19 15:02	1
Manganese	**2.4**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:02	1
Nickel	**0.053**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:02	1
Selenium	<0.050		0.050	0.020	mg/L		06/27/19 14:52	06/28/19 15:02	1
Silver	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:02	1
Zinc	**0.27**	**J B**	0.50	0.020	mg/L		06/27/19 14:52	06/28/19 15:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.036**		0.025	0.010	mg/L		06/27/19 14:53	06/28/19 12:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		06/27/19 14:52	06/28/19 19:44	1
Thallium	<0.0020		0.0020	0.0020	mg/L		06/27/19 14:52	06/28/19 19:44	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		06/28/19 10:20	07/01/19 08:31	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.018**	**J**	0.019	0.0064	mg/Kg	☼	06/27/19 14:20	06/28/19 09:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.0**		0.2	0.2	SU			06/25/19 16:11	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)D
Date Collected: 06/19/19 12:27
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-7
Matrix: Solid
Percent Solids: 85.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0075	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Benzene	<0.0017		0.0017	0.00044	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Bromoform	<0.0017		0.0017	0.00050	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Carbon disulfide	<0.0043		0.0043	0.00089	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Carbon tetrachloride	<0.0017		0.0017	0.00050	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Chlorobenzene	<0.0017		0.0017	0.00063	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Chloroform	<0.0017		0.0017	0.00059	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00052	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Dibromochloromethane	<0.0017		0.0017	0.00056	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,1-Dichloroethane	<0.0017		0.0017	0.00059	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,1-Dichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,3-Dichloropropene, Total	<0.0017		0.0017	0.00060	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Ethylbenzene	<0.0017		0.0017	0.00082	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00050	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Styrene	<0.0017		0.0017	0.00052	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00055	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Tetrachloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Toluene	<0.0017		0.0017	0.00043	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00076	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00060	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00057	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00074	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Trichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Vinyl chloride	<0.0017		0.0017	0.00076	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1
Xylenes, Total	<0.0034		0.0034	0.00055	mg/Kg	☼	06/19/19 17:37	06/26/19 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*75 - 131*	*06/19/19 17:37*	*06/26/19 17:44*	*1*
Dibromofluoromethane	*110*		*75 - 126*	*06/19/19 17:37*	*06/26/19 17:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 134*	*06/19/19 17:37*	*06/26/19 17:44*	*1*
Toluene-d8 (Surr)	*99*		*75 - 124*	*06/19/19 17:37*	*06/26/19 17:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.084	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)D
Date Collected: 06/19/19 12:27
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-7
Matrix: Solid
Percent Solids: 85.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Isophorone	<0.19		0.19	0.043	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Naphthalene	**0.029**	**J**	0.038	0.0058	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,4,5-Trichlorophenol	<0.38		0.38	0.086	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2-Methylnaphthalene	**0.11**		0.076	0.0070	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2-Nitrophenol	<0.38		0.38	0.089	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,4-Dinitrophenol	<0.76		0.76	0.67	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Fluorene	<0.038		0.038	0.0053	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Hexachlorobenzene	<0.076		0.076	0.0088	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Phenanthrene	**0.098**		0.038	0.0053	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Anthracene	<0.038		0.038	0.0063	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Carbazole	<0.19	*	0.19	0.095	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Fluoranthene	**0.012**	**J**	0.038	0.0070	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Pyrene	**0.019**	**J**	0.038	0.0075	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg		06/28/19 08:10	06/29/19 17:48	1
Benzo[a]anthracene	<0.038		0.038	0.0051	mg/Kg		06/28/19 08:10	06/29/19 17:48	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)D
Date Collected: 06/19/19 12:27
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-7
Matrix: Solid
Percent Solids: 85.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**0.031**	**J**	0.038	0.010	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Benzo[b]fluoranthene	<0.038		0.038	0.0082	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Benzo[k]fluoranthene	<0.038		0.038	0.011	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Benzo[a]pyrene	<0.038		0.038	0.0073	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Indeno[1,2,3-cd]pyrene	<0.038		0.038	0.0098	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0073	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
Benzo[g,h,i]perylene	**0.017**	**J**	0.038	0.012	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	06/28/19 08:10	06/29/19 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*82*		*31 - 166*	*06/28/19 08:10*	*06/29/19 17:48*	*1*
Phenol-d5	*84*		*30 - 153*	*06/28/19 08:10*	*06/29/19 17:48*	*1*
Nitrobenzene-d5	*73*		*37 - 147*	*06/28/19 08:10*	*06/29/19 17:48*	*1*
2-Fluorobiphenyl	*73*		*43 - 145*	*06/28/19 08:10*	*06/29/19 17:48*	*1*
2,4,6-Tribromophenol	*75*		*31 - 143*	*06/28/19 08:10*	*06/29/19 17:48*	*1*
Terphenyl-d14	*79*		*42 - 157*	*06/28/19 08:10*	*06/29/19 17:48*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.51**	**J**	1.1	0.22	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Arsenic	**6.4**		0.56	0.19	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Barium	**39**	**B**	0.56	0.064	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Beryllium	**0.74**		0.22	0.052	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Boron	**19**		2.8	0.26	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Cadmium	**0.15**	**B**	0.11	0.020	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Calcium	**52000**	**B**	56	9.5	mg/Kg	☼	06/21/19 16:35	06/25/19 12:26	5
Chromium	**17**		0.56	0.28	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Cobalt	**11**		0.28	0.073	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Copper	**23**		0.56	0.16	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Iron	**18000**	**B**	11	5.8	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Lead	**13**		0.28	0.13	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Magnesium	**24000**	**B**	5.6	2.8	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Manganese	**300**	**B**	0.56	0.081	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Nickel	**32**		0.56	0.16	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Potassium	**3700**		28	9.9	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Selenium	**0.36**	**J**	0.56	0.33	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Silver	**2.5**		0.28	0.072	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Sodium	**280**		56	8.3	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Thallium	**0.87**		0.56	0.28	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Vanadium	**21**		0.28	0.066	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1
Zinc	**53**		1.1	0.49	mg/Kg	☼	06/21/19 16:35	06/25/19 03:08	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.30**	**J**	0.50	0.050	mg/L		06/27/19 14:52	06/28/19 15:06	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		06/27/19 14:52	06/28/19 15:06	1
Boron	**0.14**	**J**	0.50	0.050	mg/L		06/27/19 14:52	06/28/19 15:06	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)D
Date Collected: 06/19/19 12:27
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-7
Matrix: Solid
Percent Solids: 85.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		06/27/19 14:52	06/28/19 15:06	1
Chromium	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:06	1
Cobalt	**0.041**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:06	1
Iron	<0.40		0.40	0.20	mg/L		06/27/19 14:52	06/28/19 15:06	1
Lead	<0.0075		0.0075	0.0075	mg/L		06/27/19 14:52	06/28/19 15:06	1
Manganese	**2.2**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:06	1
Nickel	**0.066**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:06	1
Selenium	<0.050		0.050	0.020	mg/L		06/27/19 14:52	06/28/19 15:06	1
Silver	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:06	1
Zinc	**0.080**	**J B**	0.50	0.020	mg/L		06/27/19 14:52	06/28/19 15:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.011**	**J**	0.025	0.010	mg/L		06/27/19 14:53	06/28/19 12:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		06/27/19 14:52	06/28/19 19:48	1
Thallium	<0.0020		0.0020	0.0020	mg/L		06/27/19 14:52	06/28/19 19:48	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		06/28/19 10:20	07/01/19 08:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.017**	**J**	0.019	0.0063	mg/Kg		06/27/19 14:20	06/28/19 09:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.9**		0.2	0.2	SU			06/25/19 16:15	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (4-8)
Date Collected: 06/19/19 12:35
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-8
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0073	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Benzene	<0.0017		0.0017	0.00043	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Bromodichloromethane	<0.0017		0.0017	0.00034	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Bromoform	<0.0017		0.0017	0.00049	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Bromomethane	<0.0042		0.0042	0.0016	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
2-Butanone (MEK)	<0.0042		0.0042	0.0019	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Carbon disulfide	<0.0042		0.0042	0.00088	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Carbon tetrachloride	<0.0017		0.0017	0.00049	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Chlorobenzene	<0.0017		0.0017	0.00062	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Chloroethane	<0.0042		0.0042	0.0012	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Chloroform	<0.0017		0.0017	0.00058	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Chloromethane	<0.0042		0.0042	0.0017	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00047	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00051	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Dibromochloromethane	<0.0017		0.0017	0.00055	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,1-Dichloroethane	<0.0017		0.0017	0.00058	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,2-Dichloroethane	<0.0042		0.0042	0.0013	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,1-Dichloroethene	<0.0017		0.0017	0.00058	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,3-Dichloropropene, Total	<0.0017		0.0017	0.00059	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Ethylbenzene	<0.0017		0.0017	0.00081	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
2-Hexanone	<0.0042		0.0042	0.0013	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Methylene Chloride	<0.0042		0.0042	0.0017	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
4-Methyl-2-pentanone (MIBK)	<0.0042		0.0042	0.0012	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00049	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Styrene	<0.0017		0.0017	0.00051	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00054	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Tetrachloroethene	<0.0017		0.0017	0.00057	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Toluene	<0.0017		0.0017	0.00042	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00075	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00059	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00056	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00072	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Trichloroethene	<0.0017		0.0017	0.00057	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Vinyl acetate	<0.0042		0.0042	0.0015	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Vinyl chloride	<0.0017		0.0017	0.00074	mg/Kg		06/19/19 17:37	06/26/19 18:10	1
Xylenes, Total	<0.0034		0.0034	0.00054	mg/Kg		06/19/19 17:37	06/26/19 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*75 - 131*	*06/19/19 17:37*	*06/26/19 18:10*	*1*
Dibromofluoromethane	*109*		*75 - 126*	*06/19/19 17:37*	*06/26/19 18:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 134*	*06/19/19 17:37*	*06/26/19 18:10*	*1*
Toluene-d8 (Surr)	*97*		*75 - 124*	*06/19/19 17:37*	*06/26/19 18:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.082	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.055	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
1,3-Dichlorobenzene	<0.19		0.19	0.041	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
1,4-Dichlorobenzene	<0.19		0.19	0.047	mg/Kg		06/28/19 08:10	06/29/19 18:15	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (4-8)
Date Collected: 06/19/19 12:35
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-8
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2-Methylphenol	<0.19		0.19	0.059	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Isophorone	<0.19		0.19	0.041	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,4-Dichlorophenol	<0.37		0.37	0.087	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2-Methylnaphthalene	<0.074		0.074	0.0068	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,6-Dinitrotoluene	<0.19		0.19	0.072	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Acenaphthene	<0.037		0.037	0.0066	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Fluorene	**0.041**		0.037	0.0052	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Diethyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
N-Nitrosodiphenylamine	<0.19		0.19	0.043	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Phenanthrene	**0.044**		0.037	0.0051	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Carbazole	<0.19	*	0.19	0.092	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Fluoranthene	**0.013**	**J**	0.037	0.0068	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Pyrene	**0.023**	**J**	0.037	0.0073	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Butyl benzyl phthalate	<0.19		0.19	0.070	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	06/28/19 08:10	06/29/19 18:15	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (4-8)
Date Collected: 06/19/19 12:35
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-8
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.066		0.037	0.010	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.067	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Di-n-octyl phthalate	<0.19		0.19	0.060	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Benzo[b]fluoranthene	<0.037		0.037	0.0080	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Benzo[a]pyrene	<0.037		0.037	0.0071	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0095	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0071	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg		06/28/19 08:10	06/29/19 18:15	1
3 & 4 Methylphenol	<0.19		0.19	0.061	mg/Kg		06/28/19 08:10	06/29/19 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*92*		*31 - 166*	*06/28/19 08:10*	*06/29/19 18:15*	*1*
Phenol-d5	*97*		*30 - 153*	*06/28/19 08:10*	*06/29/19 18:15*	*1*
Nitrobenzene-d5	*83*		*37 - 147*	*06/28/19 08:10*	*06/29/19 18:15*	*1*
2-Fluorobiphenyl	*84*		*43 - 145*	*06/28/19 08:10*	*06/29/19 18:15*	*1*
2,4,6-Tribromophenol	*76*		*31 - 143*	*06/28/19 08:10*	*06/29/19 18:15*	*1*
Terphenyl-d14	*86*		*42 - 157*	*06/28/19 08:10*	*06/29/19 18:15*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34	J	1.0	0.20	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Arsenic	6.5		0.51	0.17	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Barium	16	B	0.51	0.058	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Beryllium	0.37		0.20	0.047	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Boron	10		2.5	0.24	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Cadmium	0.36	B	0.10	0.018	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Calcium	100000	B	51	8.6	mg/Kg		06/21/19 16:35	06/25/19 12:30	5
Chromium	6.2		0.51	0.25	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Cobalt	9.9		0.25	0.066	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Copper	27		0.51	0.14	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Iron	14000	B	10	5.3	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Lead	13		0.25	0.12	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Magnesium	61000	B	25	13	mg/Kg		06/21/19 16:35	06/25/19 12:30	5
Manganese	840	B	0.51	0.073	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Nickel	23		0.51	0.15	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Potassium	1700		25	9.0	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Selenium	0.42	J	0.51	0.30	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Silver	0.59		0.25	0.065	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Sodium	240		51	7.5	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Thallium	<0.51		0.51	0.25	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Vanadium	9.0		0.25	0.060	mg/Kg		06/21/19 16:35	06/25/19 03:12	1
Zinc	100		1.0	0.44	mg/Kg		06/21/19 16:35	06/25/19 03:12	1

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.15	J	0.50	0.050	mg/L		06/27/19 14:52	06/28/19 15:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		06/27/19 14:52	06/28/19 15:10	1
Boron	0.095	J	0.50	0.050	mg/L		06/27/19 14:52	06/28/19 15:10	1

Client Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (4-8)
Date Collected: 06/19/19 12:35
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-8
Matrix: Solid
Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		06/27/19 14:52	06/28/19 15:10	1
Chromium	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:10	1
Cobalt	**0.038**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:10	1
Iron	<0.40		0.40	0.20	mg/L		06/27/19 14:52	06/28/19 15:10	1
Lead	<0.0075		0.0075	0.0075	mg/L		06/27/19 14:52	06/28/19 15:10	1
Manganese	**2.6**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:10	1
Nickel	**0.072**		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:10	1
Selenium	<0.050		0.050	0.020	mg/L		06/27/19 14:52	06/28/19 15:10	1
Silver	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 15:10	1
Zinc	**0.58**	**B**	0.50	0.020	mg/L		06/27/19 14:52	06/28/19 15:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		06/27/19 14:53	06/28/19 12:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		06/27/19 14:52	06/28/19 19:59	1
Thallium	<0.0020	^	0.0020	0.0020	mg/L		06/27/19 14:52	06/28/19 19:59	1

Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		06/28/19 10:20	07/01/19 08:34	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.015**	**J**	0.017	0.0057	mg/Kg	☼	06/27/19 14:20	06/28/19 09:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.9**		0.2	0.2	SU			06/25/19 16:19	1

Definitions/Glossary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

GC/MS VOA

Prep Batch: 491588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	5035	
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	5035	
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	5035	
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	5035	
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	5035	
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	5035	
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	5035	
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	5035	
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	5035	

Analysis Batch: 492111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	8260B	491588
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	8260B	491588
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	8260B	491588
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	8260B	491588
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	8260B	491588
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	8260B	491588
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	8260B	491588
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	8260B	491588
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	8260B	491588
MB 500-492111/10	Method Blank	Total/NA	Solid	8260B	
LCS 500-492111/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-492111/9	Lab Control Sample Dup	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 492507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	3541	
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	3541	
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	3541	
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	3541	
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	3541	
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	3541	
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	3541	
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	3541	
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	3541	
MB 500-492507/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-492507/2-A	Lab Control Sample	Total/NA	Solid	3541	
500-165362-1 MS	2787V-30-B01 (0-4)	Total/NA	Solid	3541	
500-165362-1 MSD	2787V-30-B01 (0-4)	Total/NA	Solid	3541	

Analysis Batch: 492568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-492507/1-A	Method Blank	Total/NA	Solid	8270D	492507
LCS 500-492507/2-A	Lab Control Sample	Total/NA	Solid	8270D	492507

Analysis Batch: 492714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	8270D	492507

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

GC/MS Semi VOA (Continued)

Analysis Batch: 492714 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	8270D	492507
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	8270D	492507
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	8270D	492507
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	8270D	492507
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	8270D	492507
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	8270D	492507
500-165362-1 MS	2787V-30-B01 (0-4)	Total/NA	Solid	8270D	492507
500-165362-1 MSD	2787V-30-B01 (0-4)	Total/NA	Solid	8270D	492507

Analysis Batch: 492848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	8270D	492507
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	8270D	492507

Metals

Prep Batch: 491462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	3050B	
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	3050B	
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	3050B	
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	3050B	
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	3050B	
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	3050B	
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	3050B	
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	3050B	
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	3050B	
MB 500-491462/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-491462/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 491810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	6010B	491462
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	6010B	491462
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	6010B	491462
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	6010B	491462
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	6010B	491462
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	6010B	491462
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	6010B	491462
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	6010B	491462
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	6010B	491462
MB 500-491462/1-A	Method Blank	Total/NA	Solid	6010B	491462
LCS 500-491462/2-A	Lab Control Sample	Total/NA	Solid	6010B	491462

Analysis Batch: 491959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	6010B	491462
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	6010B	491462
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	6010B	491462
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	6010B	491462
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	6010B	491462

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Metals (Continued)

Analysis Batch: 491959 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	6010B	491462
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	6010B	491462

Leach Batch: 492168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	TCLP	Solid	1311	
500-165362-2	2787V-30-B01 (4-8)	TCLP	Solid	1311	
500-165362-3	2787V-30-B02 (0-4)	TCLP	Solid	1311	
500-165362-4	2787V-30-B02 (4-8)	TCLP	Solid	1311	
500-165362-5	2787V-30-B04 (0-0.75)	TCLP	Solid	1311	
500-165362-6	2787V-30-B03 (0-4)	TCLP	Solid	1311	
500-165362-7	2787V-30-B03 (0-4)D	TCLP	Solid	1311	
500-165362-8	2787V-30-B03 (4-8)	TCLP	Solid	1311	
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	1311	
LB 500-492168/1-B	Method Blank	TCLP	Solid	1311	
LB 500-492168/1-C	Method Blank	TCLP	Solid	1311	
500-165362-8 MS	2787V-30-B03 (4-8)	TCLP	Solid	1311	
500-165362-9 MS	2787V-38-B01 (0-1)	TCLP	Solid	1311	
500-165362-8 DU	2787V-30-B03 (4-8)	TCLP	Solid	1311	
500-165362-9 DU	2787V-38-B01 (0-1)	TCLP	Solid	1311	

Leach Batch: 492169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	SPLP East	Solid	1312	
500-165362-2	2787V-30-B01 (4-8)	SPLP East	Solid	1312	
500-165362-3	2787V-30-B02 (0-4)	SPLP East	Solid	1312	
500-165362-4	2787V-30-B02 (4-8)	SPLP East	Solid	1312	
500-165362-5	2787V-30-B04 (0-0.75)	SPLP East	Solid	1312	
500-165362-6	2787V-30-B03 (0-4)	SPLP East	Solid	1312	
500-165362-7	2787V-30-B03 (0-4)D	SPLP East	Solid	1312	
500-165362-8	2787V-30-B03 (4-8)	SPLP East	Solid	1312	
500-165362-9	2787V-38-B01 (0-1)	SPLP East	Solid	1312	
LB 500-492169/1-B	Method Blank	SPLP East	Solid	1312	

Prep Batch: 492353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	7471B	
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	7471B	
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	7471B	
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	7471B	
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	7471B	
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	7471B	
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	7471B	
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	7471B	
MB 500-492353/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-492353/13-A	Lab Control Sample	Total/NA	Solid	7471B	
500-165362-8 MS	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	
500-165362-8 MSD	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	
500-165362-8 DU	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Metals

Prep Batch: 492417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	TCLP	Solid	3010A	492168
500-165362-2	2787V-30-B01 (4-8)	TCLP	Solid	3010A	492168
500-165362-3	2787V-30-B02 (0-4)	TCLP	Solid	3010A	492168
500-165362-4	2787V-30-B02 (4-8)	TCLP	Solid	3010A	492168
500-165362-5	2787V-30-B04 (0-0.75)	TCLP	Solid	3010A	492168
500-165362-6	2787V-30-B03 (0-4)	TCLP	Solid	3010A	492168
500-165362-7	2787V-30-B03 (0-4)D	TCLP	Solid	3010A	492168
500-165362-8	2787V-30-B03 (4-8)	TCLP	Solid	3010A	492168
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	3010A	492168
LB 500-492168/1-B	Method Blank	TCLP	Solid	3010A	492168
LCS 500-492417/2-A	Lab Control Sample	Total/NA	Solid	3010A	
500-165362-9 MS	2787V-38-B01 (0-1)	TCLP	Solid	3010A	492168
500-165362-9 DU	2787V-38-B01 (0-1)	TCLP	Solid	3010A	492168

Prep Batch: 492418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	SPLP East	Solid	3010A	492169
500-165362-2	2787V-30-B01 (4-8)	SPLP East	Solid	3010A	492169
500-165362-3	2787V-30-B02 (0-4)	SPLP East	Solid	3010A	492169
500-165362-4	2787V-30-B02 (4-8)	SPLP East	Solid	3010A	492169
500-165362-5	2787V-30-B04 (0-0.75)	SPLP East	Solid	3010A	492169
500-165362-6	2787V-30-B03 (0-4)	SPLP East	Solid	3010A	492169
500-165362-7	2787V-30-B03 (0-4)D	SPLP East	Solid	3010A	492169
500-165362-8	2787V-30-B03 (4-8)	SPLP East	Solid	3010A	492169
500-165362-9	2787V-38-B01 (0-1)	SPLP East	Solid	3010A	492169
LB 500-492169/1-B	Method Blank	SPLP East	Solid	3010A	492169
LCS 500-492418/2-A	Lab Control Sample	Total/NA	Solid	3010A	

Prep Batch: 492557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	TCLP	Solid	7470A	492168
500-165362-2	2787V-30-B01 (4-8)	TCLP	Solid	7470A	492168
500-165362-3	2787V-30-B02 (0-4)	TCLP	Solid	7470A	492168
500-165362-4	2787V-30-B02 (4-8)	TCLP	Solid	7470A	492168
500-165362-5	2787V-30-B04 (0-0.75)	TCLP	Solid	7470A	492168
500-165362-6	2787V-30-B03 (0-4)	TCLP	Solid	7470A	492168
500-165362-7	2787V-30-B03 (0-4)D	TCLP	Solid	7470A	492168
500-165362-8	2787V-30-B03 (4-8)	TCLP	Solid	7470A	492168
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	7470A	492168
LB 500-492168/1-C	Method Blank	TCLP	Solid	7470A	492168
MB 500-492557/12-A	Method Blank	Total/NA	Solid	7470A	
LCS 500-492557/13-A	Lab Control Sample	Total/NA	Solid	7470A	
500-165362-8 MS	2787V-30-B03 (4-8)	TCLP	Solid	7470A	492168
500-165362-8 DU	2787V-30-B03 (4-8)	TCLP	Solid	7470A	492168

Analysis Batch: 492561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	7471B	492353
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	7471B	492353
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	7471B	492353
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	7471B	492353

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Metals (Continued)

Analysis Batch: 492561 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	7471B	492353
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	7471B	492353
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	7471B	492353
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	492353
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	7471B	492353
MB 500-492353/12-A	Method Blank	Total/NA	Solid	7471B	492353
LCS 500-492353/13-A	Lab Control Sample	Total/NA	Solid	7471B	492353
500-165362-8 MS	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	492353
500-165362-8 MSD	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	492353
500-165362-8 DU	2787V-30-B03 (4-8)	Total/NA	Solid	7471B	492353

Analysis Batch: 492607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	SPLP East	Solid	6010B	492418
500-165362-2	2787V-30-B01 (4-8)	SPLP East	Solid	6010B	492418
500-165362-3	2787V-30-B02 (0-4)	SPLP East	Solid	6010B	492418
500-165362-4	2787V-30-B02 (4-8)	SPLP East	Solid	6010B	492418
500-165362-5	2787V-30-B04 (0-0.75)	SPLP East	Solid	6010B	492418
500-165362-6	2787V-30-B03 (0-4)	SPLP East	Solid	6010B	492418
500-165362-7	2787V-30-B03 (0-4)D	SPLP East	Solid	6010B	492418
500-165362-8	2787V-30-B03 (4-8)	SPLP East	Solid	6010B	492418
500-165362-9	2787V-38-B01 (0-1)	SPLP East	Solid	6010B	492418
LB 500-492169/1-B	Method Blank	SPLP East	Solid	6010B	492418
LCS 500-492418/2-A	Lab Control Sample	Total/NA	Solid	6010B	492418

Analysis Batch: 492795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	TCLP	Solid	6010B	492417
500-165362-2	2787V-30-B01 (4-8)	TCLP	Solid	6010B	492417
500-165362-3	2787V-30-B02 (0-4)	TCLP	Solid	6010B	492417
500-165362-4	2787V-30-B02 (4-8)	TCLP	Solid	6010B	492417
500-165362-5	2787V-30-B04 (0-0.75)	TCLP	Solid	6010B	492417
500-165362-6	2787V-30-B03 (0-4)	TCLP	Solid	6010B	492417
500-165362-7	2787V-30-B03 (0-4)D	TCLP	Solid	6010B	492417
500-165362-8	2787V-30-B03 (4-8)	TCLP	Solid	6010B	492417
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	6010B	492417
LB 500-492168/1-B	Method Blank	TCLP	Solid	6010B	492417
LCS 500-492417/2-A	Lab Control Sample	Total/NA	Solid	6010B	492417
500-165362-9 MS	2787V-38-B01 (0-1)	TCLP	Solid	6010B	492417
500-165362-9 DU	2787V-38-B01 (0-1)	TCLP	Solid	6010B	492417

Analysis Batch: 492835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	TCLP	Solid	6020A	492417
500-165362-2	2787V-30-B01 (4-8)	TCLP	Solid	6020A	492417
500-165362-3	2787V-30-B02 (0-4)	TCLP	Solid	6020A	492417
500-165362-4	2787V-30-B02 (4-8)	TCLP	Solid	6020A	492417
500-165362-5	2787V-30-B04 (0-0.75)	TCLP	Solid	6020A	492417
500-165362-6	2787V-30-B03 (0-4)	TCLP	Solid	6020A	492417
500-165362-7	2787V-30-B03 (0-4)D	TCLP	Solid	6020A	492417
500-165362-8	2787V-30-B03 (4-8)	TCLP	Solid	6020A	492417

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Metals (Continued)

Analysis Batch: 492835 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	6020A	492417
LB 500-492168/1-B	Method Blank	TCLP	Solid	6020A	492417
LCS 500-492417/2-A	Lab Control Sample	Total/NA	Solid	6020A	492417
500-165362-9 MS	2787V-38-B01 (0-1)	TCLP	Solid	6020A	492417
500-165362-9 DU	2787V-38-B01 (0-1)	TCLP	Solid	6020A	492417

Analysis Batch: 492869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	TCLP	Solid	7470A	492557
500-165362-2	2787V-30-B01 (4-8)	TCLP	Solid	7470A	492557
500-165362-3	2787V-30-B02 (0-4)	TCLP	Solid	7470A	492557
500-165362-4	2787V-30-B02 (4-8)	TCLP	Solid	7470A	492557
500-165362-5	2787V-30-B04 (0-0.75)	TCLP	Solid	7470A	492557
500-165362-6	2787V-30-B03 (0-4)	TCLP	Solid	7470A	492557
500-165362-7	2787V-30-B03 (0-4)D	TCLP	Solid	7470A	492557
500-165362-8	2787V-30-B03 (4-8)	TCLP	Solid	7470A	492557
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	7470A	492557
LB 500-492168/1-C	Method Blank	TCLP	Solid	7470A	492557
MB 500-492557/12-A	Method Blank	Total/NA	Solid	7470A	492557
LCS 500-492557/13-A	Lab Control Sample	Total/NA	Solid	7470A	492557
500-165362-8 MS	2787V-30-B03 (4-8)	TCLP	Solid	7470A	492557
500-165362-8 DU	2787V-30-B03 (4-8)	TCLP	Solid	7470A	492557

Analysis Batch: 492905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-9	2787V-38-B01 (0-1)	TCLP	Solid	6010B	492417
500-165362-9 MS	2787V-38-B01 (0-1)	TCLP	Solid	6010B	492417
500-165362-9 DU	2787V-38-B01 (0-1)	TCLP	Solid	6010B	492417

General Chemistry

Analysis Batch: 491230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	Moisture	
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	Moisture	
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	Moisture	
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	Moisture	
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	Moisture	
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	Moisture	
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	Moisture	
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	Moisture	
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	Moisture	
500-165362-5 DU	2787V-30-B04 (0-0.75)	Total/NA	Solid	Moisture	

Analysis Batch: 491906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-1	2787V-30-B01 (0-4)	Total/NA	Solid	9045D	
500-165362-2	2787V-30-B01 (4-8)	Total/NA	Solid	9045D	
500-165362-3	2787V-30-B02 (0-4)	Total/NA	Solid	9045D	
500-165362-4	2787V-30-B02 (4-8)	Total/NA	Solid	9045D	
500-165362-5	2787V-30-B04 (0-0.75)	Total/NA	Solid	9045D	

QC Association Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

General Chemistry (Continued)

Analysis Batch: 491906 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-165362-6	2787V-30-B03 (0-4)	Total/NA	Solid	9045D	
500-165362-7	2787V-30-B03 (0-4)D	Total/NA	Solid	9045D	
500-165362-8	2787V-30-B03 (4-8)	Total/NA	Solid	9045D	
500-165362-9	2787V-38-B01 (0-1)	Total/NA	Solid	9045D	
LCS 500-491906/5	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-491906/6	Lab Control Sample Dup	Total/NA	Solid	9045D	

Surrogate Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(75-131)	(75-126)	(70-134)	(75-124)
500-165362-1	2787V-30-B01 (0-4)	103	112	107	95
500-165362-2	2787V-30-B01 (4-8)	109	110	106	98
500-165362-3	2787V-30-B02 (0-4)	103	110	106	96
500-165362-4	2787V-30-B02 (4-8)	103	111	108	95
500-165362-5	2787V-30-B04 (0-0.75)	107	107	103	94
500-165362-6	2787V-30-B03 (0-4)	113	109	106	98
500-165362-7	2787V-30-B03 (0-4)D	111	110	107	99
500-165362-8	2787V-30-B03 (4-8)	105	109	104	97
500-165362-9	2787V-38-B01 (0-1)	104	110	102	94
LCS 500-492111/5	Lab Control Sample	99	110	102	96
LCSD 500-492111/9	Lab Control Sample Dup	100	107	101	96
MB 500-492111/10	Method Blank	102	105	94	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	PHL	NBZ	FBP	TBP	TPHL
Lab Sample ID	Client Sample ID	(31-166)	(30-153)	(37-147)	(43-145)	(31-143)	(42-157)
500-165362-1	2787V-30-B01 (0-4)	85	93	77	76	72	90
500-165362-1 MS	2787V-30-B01 (0-4)	92	98	81	77	89	96
500-165362-1 MSD	2787V-30-B01 (0-4)	86	88	75	73	79	91
500-165362-2	2787V-30-B01 (4-8)	73	73	65	64	59	76
500-165362-3	2787V-30-B02 (0-4)	95	97	87	82	83	89
500-165362-4	2787V-30-B02 (4-8)	98	101	87	80	85	88
500-165362-5	2787V-30-B04 (0-0.75)	156	149	107	113	114	121
500-165362-6	2787V-30-B03 (0-4)	99	105	89	85	89	94
500-165362-7	2787V-30-B03 (0-4)D	82	84	73	73	75	79
500-165362-8	2787V-30-B03 (4-8)	92	97	83	84	76	86
500-165362-9	2787V-38-B01 (0-1)	108	108	86	82	91	89
LCS 500-492507/2-A	Lab Control Sample	112	96	94	89	87	96
MB 500-492507/1-A	Method Blank	108	92	82	81	50	94

Surrogate Legend

2FP = 2-Fluorophenol
PHL = Phenol-d5
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TBP = 2,4,6-Tribromophenol
TPHL = Terphenyl-d14

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: MB 500-492111/10
Matrix: Solid
Analysis Batch: 492111

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0087	mg/Kg			06/26/19 14:17	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			06/26/19 14:17	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			06/26/19 14:17	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			06/26/19 14:17	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			06/26/19 14:17	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			06/26/19 14:17	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			06/26/19 14:17	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			06/26/19 14:17	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			06/26/19 14:17	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			06/26/19 14:17	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			06/26/19 14:17	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			06/26/19 14:17	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			06/26/19 14:17	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			06/26/19 14:17	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			06/26/19 14:17	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			06/26/19 14:17	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			06/26/19 14:17	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			06/26/19 14:17	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			06/26/19 14:17	1
1,3-Dichloropropene, Total	<0.0020		0.0020	0.00070	mg/Kg			06/26/19 14:17	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			06/26/19 14:17	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			06/26/19 14:17	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			06/26/19 14:17	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			06/26/19 14:17	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			06/26/19 14:17	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			06/26/19 14:17	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			06/26/19 14:17	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			06/26/19 14:17	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			06/26/19 14:17	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			06/26/19 14:17	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			06/26/19 14:17	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			06/26/19 14:17	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			06/26/19 14:17	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			06/26/19 14:17	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			06/26/19 14:17	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			06/26/19 14:17	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			06/26/19 14:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*75 - 131*		*06/26/19 14:17*	*1*
Dibromofluoromethane	*105*		*75 - 126*		*06/26/19 14:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 134*		*06/26/19 14:17*	*1*
Toluene-d8 (Surr)	*95*		*75 - 124*		*06/26/19 14:17*	*1*

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: LCS 500-492111/5
Matrix: Solid
Analysis Batch: 492111

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.0500	0.0454		mg/Kg		91	40 - 150
Benzene	0.0500	0.0463		mg/Kg		93	70 - 125
Bromodichloromethane	0.0500	0.0485		mg/Kg		97	67 - 129
Bromoform	0.0500	0.0502		mg/Kg		100	68 - 136
Bromomethane	0.0500	0.0393		mg/Kg		79	70 - 130
2-Butanone (MEK)	0.0500	0.0456		mg/Kg		91	47 - 138
Carbon disulfide	0.0500	0.0478		mg/Kg		96	70 - 129
Carbon tetrachloride	0.0500	0.0518		mg/Kg		104	75 - 125
Chlorobenzene	0.0500	0.0510		mg/Kg		102	50 - 150
Chloroethane	0.0500	0.0424		mg/Kg		85	75 - 125
Chloroform	0.0500	0.0500		mg/Kg		100	57 - 135
Chloromethane	0.0500	0.0505		mg/Kg		101	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0505		mg/Kg		101	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0449		mg/Kg		90	70 - 125
Dibromochloromethane	0.0500	0.0462		mg/Kg		92	69 - 125
1,1-Dichloroethane	0.0500	0.0498		mg/Kg		100	70 - 125
1,2-Dichloroethane	0.0500	0.0509		mg/Kg		102	70 - 130
1,1-Dichloroethene	0.0500	0.0444		mg/Kg		89	70 - 120
1,2-Dichloropropane	0.0500	0.0497		mg/Kg		99	70 - 125
Ethylbenzene	0.0500	0.0472		mg/Kg		94	61 - 136
2-Hexanone	0.0500	0.0439		mg/Kg		88	48 - 146
Methylene Chloride	0.0500	0.0536		mg/Kg		107	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0434		mg/Kg		87	50 - 148
Methyl tert-butyl ether	0.0500	0.0540		mg/Kg		108	50 - 140
Styrene	0.0500	0.0457		mg/Kg		91	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0481		mg/Kg		96	70 - 122
Tetrachloroethene	0.0500	0.0497		mg/Kg		99	70 - 124
Toluene	0.0500	0.0466		mg/Kg		93	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0473		mg/Kg		95	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0433		mg/Kg		87	70 - 125
1,1,1-Trichloroethane	0.0500	0.0517		mg/Kg		103	70 - 128
1,1,2-Trichloroethane	0.0500	0.0454		mg/Kg		91	70 - 125
Trichloroethene	0.0500	0.0519		mg/Kg		104	70 - 125
Vinyl acetate	0.0500	0.0350		mg/Kg		70	40 - 153
Vinyl chloride	0.0500	0.0481		mg/Kg		96	70 - 125
Xylenes, Total	0.100	0.0947		mg/Kg		95	53 - 147

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*75 - 131*
Dibromofluoromethane	*110*		*75 - 126*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 134*
Toluene-d8 (Surr)	*96*		*75 - 124*

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: LCSD 500-492111/9
Matrix: Solid
Analysis Batch: 492111

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			0.0500	0.0435		mg/Kg		87	40 - 150	4	30
Benzene			0.0500	0.0427		mg/Kg		85	70 - 125	8	30
Bromodichloromethane			0.0500	0.0446		mg/Kg		89	67 - 129	8	30
Bromoform			0.0500	0.0467		mg/Kg		93	68 - 136	7	30
Bromomethane			0.0500	0.0378		mg/Kg		76	70 - 130	4	30
2-Butanone (MEK)			0.0500	0.0471		mg/Kg		94	47 - 138	3	30
Carbon disulfide			0.0500	0.0452		mg/Kg		90	70 - 129	5	30
Carbon tetrachloride			0.0500	0.0473		mg/Kg		95	75 - 125	9	30
Chlorobenzene			0.0500	0.0483		mg/Kg		97	50 - 150	5	30
Chloroethane			0.0500	0.0448		mg/Kg		90	75 - 125	6	30
Chloroform			0.0500	0.0465		mg/Kg		93	57 - 135	7	30
Chloromethane			0.0500	0.0511		mg/Kg		102	70 - 125	1	30
cis-1,2-Dichloroethene			0.0500	0.0451		mg/Kg		90	70 - 125	11	30
cis-1,3-Dichloropropene			0.0500	0.0421		mg/Kg		84	70 - 125	6	30
Dibromochloromethane			0.0500	0.0439		mg/Kg		88	69 - 125	5	30
1,1-Dichloroethane			0.0500	0.0466		mg/Kg		93	70 - 125	7	30
1,2-Dichloroethane			0.0500	0.0467		mg/Kg		93	70 - 130	9	30
1,1-Dichloroethene			0.0500	0.0424		mg/Kg		85	70 - 120	5	30
1,2-Dichloropropane			0.0500	0.0451		mg/Kg		90	70 - 125	10	30
Ethylbenzene			0.0500	0.0456		mg/Kg		91	61 - 136	3	30
2-Hexanone			0.0500	0.0471		mg/Kg		94	48 - 146	7	30
Methylene Chloride			0.0500	0.0481		mg/Kg		96	70 - 126	11	30
4-Methyl-2-pentanone (MIBK)			0.0500	0.0448		mg/Kg		90	50 - 148	3	30
Methyl tert-butyl ether			0.0500	0.0507		mg/Kg		101	50 - 140	6	30
Styrene			0.0500	0.0435		mg/Kg		87	70 - 125	5	30
1,1,2,2-Tetrachloroethane			0.0500	0.0443		mg/Kg		89	70 - 122	8	30
Tetrachloroethene			0.0500	0.0479		mg/Kg		96	70 - 124	4	30
Toluene			0.0500	0.0444		mg/Kg		89	70 - 125	5	30
trans-1,2-Dichloroethene			0.0500	0.0460		mg/Kg		92	70 - 125	3	30
trans-1,3-Dichloropropene			0.0500	0.0420		mg/Kg		84	70 - 125	3	30
1,1,1-Trichloroethane			0.0500	0.0467		mg/Kg		93	70 - 128	10	30
1,1,2-Trichloroethane			0.0500	0.0437		mg/Kg		87	70 - 125	4	30
Trichloroethene			0.0500	0.0481		mg/Kg		96	70 - 125	8	30
Vinyl acetate			0.0500	0.0354		mg/Kg		71	40 - 153	1	30
Vinyl chloride			0.0500	0.0474		mg/Kg		95	70 - 125	1	30
Xylenes, Total			0.100	0.0908		mg/Kg		91	53 - 147	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*75 - 131*
Dibromofluoromethane	*107*		*75 - 126*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 134*
Toluene-d8 (Surr)	*96*		*75 - 124*

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: MB 500-492507/1-A
Matrix: Solid
Analysis Batch: 492568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 492507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.17		0.17	0.074	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.050	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
1,3-Dichlorobenzene	<0.17		0.17	0.037	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
1,4-Dichlorobenzene	<0.17		0.17	0.043	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
1,2-Dichlorobenzene	<0.17		0.17	0.040	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2-Methylphenol	<0.17		0.17	0.053	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.039	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
N-Nitrosodi-n-propylamine	<0.067		0.067	0.041	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Hexachloroethane	<0.17		0.17	0.051	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2-Chlorophenol	<0.17		0.17	0.057	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Nitrobenzene	<0.033		0.033	0.0083	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.034	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.036	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Isophorone	<0.17		0.17	0.037	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,4-Dimethylphenol	<0.33		0.33	0.13	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Hexachlorobutadiene	<0.17		0.17	0.052	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Naphthalene	<0.033		0.033	0.0051	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,4-Dichlorophenol	<0.33		0.33	0.079	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4-Chloroaniline	<0.67		0.67	0.16	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,4,6-Trichlorophenol	<0.33		0.33	0.11	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,4,5-Trichlorophenol	<0.33		0.33	0.076	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Hexachlorocyclopentadiene	<0.67		0.67	0.19	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2-Methylnaphthalene	<0.067		0.067	0.0061	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2-Nitroaniline	<0.17		0.17	0.045	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2-Chloronaphthalene	<0.17		0.17	0.037	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4-Chloro-3-methylphenol	<0.33		0.33	0.11	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,6-Dinitrotoluene	<0.17		0.17	0.065	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2-Nitrophenol	<0.33		0.33	0.079	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
3-Nitroaniline	<0.33		0.33	0.10	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Dimethyl phthalate	<0.17		0.17	0.043	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,4-Dinitrophenol	<0.67		0.67	0.59	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Acenaphthylene	<0.033		0.033	0.0044	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
2,4-Dinitrotoluene	<0.17		0.17	0.053	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Acenaphthene	<0.033		0.033	0.0060	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Dibenzofuran	<0.17		0.17	0.039	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4-Nitrophenol	<0.67		0.67	0.32	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Fluorene	<0.033		0.033	0.0047	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4-Nitroaniline	<0.33		0.33	0.14	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.044	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Hexachlorobenzene	<0.067		0.067	0.0077	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Diethyl phthalate	<0.17		0.17	0.056	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.039	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Pentachlorophenol	<0.67		0.67	0.53	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
N-Nitrosodiphenylamine	<0.17		0.17	0.039	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
4,6-Dinitro-2-methylphenol	<0.67		0.67	0.27	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Phenanthrene	<0.033		0.033	0.0046	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Anthracene	<0.033		0.033	0.0056	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Carbazole	<0.17		0.17	0.083	mg/Kg		06/28/19 08:10	06/28/19 16:36	1

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: MB 500-492507/1-A
Matrix: Solid
Analysis Batch: 492568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 492507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<0.17		0.17	0.051	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Fluoranthene	<0.033		0.033	0.0062	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Pyrene	<0.033		0.033	0.0066	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Butyl benzyl phthalate	<0.17		0.17	0.063	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Benzo[a]anthracene	<0.033		0.033	0.0045	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Chrysene	<0.033		0.033	0.0091	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.047	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.061	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Di-n-octyl phthalate	<0.17		0.17	0.054	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Benzo[b]fluoranthene	<0.033		0.033	0.0072	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Benzo[k]fluoranthene	<0.033		0.033	0.0098	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Benzo[a]pyrene	<0.033		0.033	0.0064	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Indeno[1,2,3-cd]pyrene	<0.033		0.033	0.0086	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Dibenz(a,h)anthracene	<0.033		0.033	0.0064	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
Benzo[g,h,i]perylene	<0.033		0.033	0.011	mg/Kg		06/28/19 08:10	06/28/19 16:36	1
3 & 4 Methylphenol	<0.17		0.17	0.055	mg/Kg		06/28/19 08:10	06/28/19 16:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*108*		*31 - 166*	*06/28/19 08:10*	*06/28/19 16:36*	*1*
Phenol-d5	*92*		*30 - 153*	*06/28/19 08:10*	*06/28/19 16:36*	*1*
Nitrobenzene-d5	*82*		*37 - 147*	*06/28/19 08:10*	*06/28/19 16:36*	*1*
2-Fluorobiphenyl	*81*		*43 - 145*	*06/28/19 08:10*	*06/28/19 16:36*	*1*
2,4,6-Tribromophenol	*50*		*31 - 143*	*06/28/19 08:10*	*06/28/19 16:36*	*1*
Terphenyl-d14	*94*		*42 - 157*	*06/28/19 08:10*	*06/28/19 16:36*	*1*

Lab Sample ID: LCS 500-492507/2-A
Matrix: Solid
Analysis Batch: 492568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	1.33	1.22		mg/Kg		92	56 - 122
Bis(2-chloroethyl)ether	1.33	1.10		mg/Kg		83	55 - 111
1,3-Dichlorobenzene	1.33	1.09		mg/Kg		81	65 - 124
1,4-Dichlorobenzene	1.33	1.10		mg/Kg		83	61 - 110
1,2-Dichlorobenzene	1.33	1.11		mg/Kg		83	62 - 110
2-Methylphenol	1.33	1.18		mg/Kg		88	60 - 120
2,2'-oxybis[1-chloropropane]	1.33	1.27		mg/Kg		95	40 - 124
N-Nitrosodi-n-propylamine	1.33	1.14		mg/Kg		85	56 - 118
Hexachloroethane	1.33	1.06		mg/Kg		80	60 - 114
2-Chlorophenol	1.33	1.21		mg/Kg		91	64 - 110
Nitrobenzene	1.33	1.27		mg/Kg		95	60 - 116
Bis(2-chloroethoxy)methane	1.33	1.17		mg/Kg		88	60 - 112
1,2,4-Trichlorobenzene	1.33	1.16		mg/Kg		87	66 - 117
Isophorone	1.33	1.19		mg/Kg		89	55 - 110
2,4-Dimethylphenol	1.33	1.20		mg/Kg		90	60 - 110
Hexachlorobutadiene	1.33	1.16		mg/Kg		87	56 - 120
Naphthalene	1.33	1.17		mg/Kg		87	63 - 110
2,4-Dichlorophenol	1.33	1.22		mg/Kg		91	58 - 120

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: LCS 500-492507/2-A
Matrix: Solid
Analysis Batch: 492568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloroaniline	1.33	1.18		mg/Kg		89	30 - 150
2,4,6-Trichlorophenol	1.33	1.16		mg/Kg		87	57 - 120
2,4,5-Trichlorophenol	1.33	1.20		mg/Kg		90	50 - 120
Hexachlorocyclopentadiene	1.33	0.720		mg/Kg		54	10 - 133
2-Methylnaphthalene	1.33	1.18		mg/Kg		89	69 - 112
2-Nitroaniline	1.33	1.25		mg/Kg		94	57 - 124
2-Chloronaphthalene	1.33	1.19		mg/Kg		89	69 - 114
4-Chloro-3-methylphenol	1.33	1.21		mg/Kg		91	65 - 122
2,6-Dinitrotoluene	1.33	1.18		mg/Kg		89	70 - 123
2-Nitrophenol	1.33	1.22		mg/Kg		91	60 - 120
3-Nitroaniline	1.33	1.32		mg/Kg		99	40 - 122
Dimethyl phthalate	1.33	1.21		mg/Kg		91	69 - 116
2,4-Dinitrophenol	2.67	<0.67		mg/Kg		22	10 - 100
Acenaphthylene	1.33	1.21		mg/Kg		91	68 - 120
2,4-Dinitrotoluene	1.33	1.32		mg/Kg		99	69 - 124
Acenaphthene	1.33	1.20		mg/Kg		90	65 - 124
Dibenzofuran	1.33	1.19		mg/Kg		89	66 - 115
4-Nitrophenol	2.67	2.27		mg/Kg		85	30 - 122
Fluorene	1.33	1.23		mg/Kg		93	62 - 120
4-Nitroaniline	1.33	1.30		mg/Kg		98	60 - 160
4-Bromophenyl phenyl ether	1.33	1.19		mg/Kg		89	68 - 118
Hexachlorobenzene	1.33	1.24		mg/Kg		93	63 - 124
Diethyl phthalate	1.33	1.25		mg/Kg		94	58 - 120
4-Chlorophenyl phenyl ether	1.33	1.22		mg/Kg		92	62 - 119
Pentachlorophenol	2.67	1.68		mg/Kg		63	13 - 112
N-Nitrosodiphenylamine	1.33	1.33		mg/Kg		100	65 - 112
4,6-Dinitro-2-methylphenol	2.67	1.01		mg/Kg		38	10 - 110
Phenanthrene	1.33	1.21		mg/Kg		90	62 - 120
Anthracene	1.33	1.24		mg/Kg		93	70 - 114
Carbazole	1.33	1.91	*	mg/Kg		143	65 - 142
Di-n-butyl phthalate	1.33	1.26		mg/Kg		95	65 - 120
Fluoranthene	1.33	1.24		mg/Kg		93	62 - 120
Pyrene	1.33	1.28		mg/Kg		96	61 - 128
Butyl benzyl phthalate	1.33	1.35		mg/Kg		102	71 - 129
Benzo[a]anthracene	1.33	1.22		mg/Kg		92	67 - 122
Chrysene	1.33	1.23		mg/Kg		92	63 - 120
3,3'-Dichlorobenzidine	1.33	1.40		mg/Kg		105	35 - 128
Bis(2-ethylhexyl) phthalate	1.33	1.36		mg/Kg		102	72 - 131
Di-n-octyl phthalate	1.33	1.33		mg/Kg		99	68 - 134
Benzo[b]fluoranthene	1.33	1.27		mg/Kg		95	69 - 129
Benzo[k]fluoranthene	1.33	1.29		mg/Kg		96	68 - 127
Benzo[a]pyrene	1.33	1.44		mg/Kg		108	65 - 133
Indeno[1,2,3-cd]pyrene	1.33	1.36		mg/Kg		102	68 - 130
Dibenz(a,h)anthracene	1.33	1.35		mg/Kg		102	64 - 131
Benzo[g,h,i]perylene	1.33	1.35		mg/Kg		101	72 - 131
3 & 4 Methylphenol	1.33	1.15		mg/Kg		87	57 - 120

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: LCS 500-492507/2-A
Matrix: Solid
Analysis Batch: 492568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492507

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol	*112*		*31 - 166*
Phenol-d5	*96*		*30 - 153*
Nitrobenzene-d5	*94*		*37 - 147*
2-Fluorobiphenyl	*89*		*43 - 145*
2,4,6-Tribromophenol	*87*		*31 - 143*
Terphenyl-d14	*96*		*42 - 157*

Lab Sample ID: 500-165362-1 MS
Matrix: Solid
Analysis Batch: 492714

Client Sample ID: 2787V-30-B01 (0-4)
Prep Type: Total/NA
Prep Batch: 492507

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	<0.20		1.56	1.50		mg/Kg	☼	97	56 - 122
Bis(2-chloroethyl)ether	<0.20		1.56	1.31		mg/Kg	☼	84	55 - 111
1,3-Dichlorobenzene	<0.20		1.56	1.18		mg/Kg	☼	76	60 - 110
1,4-Dichlorobenzene	<0.20		1.56	1.19		mg/Kg	☼	76	61 - 110
1,2-Dichlorobenzene	<0.20		1.56	1.24		mg/Kg	☼	80	62 - 110
2-Methylphenol	<0.20		1.56	1.68		mg/Kg	☼	108	60 - 120
2,2'-oxybis[1-chloropropane]	<0.20	F1	1.56	1.99	F1	mg/Kg	☼	128	40 - 124
N-Nitrosodi-n-propylamine	<0.078		1.56	1.50		mg/Kg	☼	97	56 - 118
Hexachloroethane	<0.20	F1	1.56	0.947		mg/Kg	☼	61	60 - 114
2-Chlorophenol	<0.20		1.56	1.47		mg/Kg	☼	94	64 - 110
Nitrobenzene	<0.039		1.56	1.34		mg/Kg	☼	86	60 - 116
Bis(2-chloroethoxy)methane	<0.20		1.56	1.34		mg/Kg	☼	86	60 - 112
1,2,4-Trichlorobenzene	<0.20		1.56	1.29		mg/Kg	☼	83	66 - 117
Isophorone	<0.20		1.56	1.31		mg/Kg	☼	84	55 - 110
2,4-Dimethylphenol	<0.39		1.56	1.42		mg/Kg	☼	91	60 - 110
Hexachlorobutadiene	<0.20		1.56	1.28		mg/Kg	☼	82	56 - 120
Naphthalene	0.018	J	1.56	1.27		mg/Kg	☼	80	63 - 110
2,4-Dichlorophenol	<0.39		1.56	1.51		mg/Kg	☼	97	58 - 120
4-Chloroaniline	<0.78		1.56	1.12		mg/Kg	☼	72	30 - 150
2,4,6-Trichlorophenol	<0.39		1.56	1.44		mg/Kg	☼	92	57 - 120
2,4,5-Trichlorophenol	<0.39		1.56	1.44		mg/Kg	☼	92	50 - 120
Hexachlorocyclopentadiene	<0.78	F1	1.56	<0.78	F1	mg/Kg	☼	0	10 - 133
2-Methylnaphthalene	0.053	J	1.56	1.34		mg/Kg	☼	82	69 - 112
2-Nitroaniline	<0.20		1.56	1.41		mg/Kg	☼	91	57 - 124
2-Chloronaphthalene	<0.20		1.56	1.30		mg/Kg	☼	83	69 - 114
4-Chloro-3-methylphenol	<0.39		1.56	1.47		mg/Kg	☼	94	65 - 122
2,6-Dinitrotoluene	<0.20		1.56	1.44		mg/Kg	☼	92	70 - 123
2-Nitrophenol	<0.39		1.56	1.36		mg/Kg	☼	87	60 - 120
3-Nitroaniline	<0.39		1.56	1.45		mg/Kg	☼	93	40 - 122
Dimethyl phthalate	<0.20		1.56	1.37		mg/Kg	☼	88	69 - 116
2,4-Dinitrophenol	<0.78	F1	3.12	0.922		mg/Kg	☼	30	10 - 100
Acenaphthylene	<0.039		1.56	1.30		mg/Kg	☼	84	68 - 120
2,4-Dinitrotoluene	<0.20		1.56	1.37		mg/Kg	☼	88	69 - 124
Acenaphthene	<0.039		1.56	1.32		mg/Kg	☼	85	65 - 124
Dibenzofuran	<0.20		1.56	1.32		mg/Kg	☼	84	66 - 115
4-Nitrophenol	<0.78		3.12	3.37		mg/Kg	☼	108	30 - 122

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: 500-165362-1 MS — **Client Sample ID: 2787V-30-B01 (0-4)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492714 — **Prep Batch: 492507**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	<0.039		1.56	1.36		mg/Kg	☼	87	62 - 120
4-Nitroaniline	<0.39		1.56	1.47		mg/Kg	☼	95	60 - 160
4-Bromophenyl phenyl ether	<0.20		1.56	1.48		mg/Kg	☼	95	68 - 118
Hexachlorobenzene	<0.078		1.56	1.51		mg/Kg	☼	97	63 - 124
Diethyl phthalate	<0.20		1.56	1.44		mg/Kg	☼	92	58 - 120
4-Chlorophenyl phenyl ether	<0.20		1.56	1.39		mg/Kg	☼	89	62 - 119
Pentachlorophenol	<0.78		3.12	2.23		mg/Kg	☼	71	13 - 112
N-Nitrosodiphenylamine	<0.20		1.56	1.48		mg/Kg	☼	95	65 - 112
4,6-Dinitro-2-methylphenol	<0.78	F2	3.12	0.535	J	mg/Kg	☼	17	10 - 110
Phenanthrene	0.11		1.56	1.61		mg/Kg	☼	96	62 - 120
Anthracene	0.013	J	1.56	1.48		mg/Kg	☼	94	70 - 114
Carbazole	<0.20	*	1.56	1.63		mg/Kg	☼	105	65 - 142
Di-n-butyl phthalate	<0.20		1.56	1.42		mg/Kg	☼	91	65 - 120
Fluoranthene	0.11		1.56	1.69		mg/Kg	☼	101	62 - 120
Pyrene	0.10		1.56	1.63		mg/Kg	☼	98	61 - 128
Butyl benzyl phthalate	<0.20		1.56	1.51		mg/Kg	☼	97	71 - 129
Benzo[a]anthracene	0.055		1.56	1.62		mg/Kg	☼	100	67 - 122
Chrysene	0.082		1.56	1.72		mg/Kg	☼	105	63 - 120
3,3'-Dichlorobenzidine	<0.20	F1 F2	1.56	0.315	F1	mg/Kg	☼	20	35 - 128
Bis(2-ethylhexyl) phthalate	<0.20		1.56	1.53		mg/Kg	☼	98	72 - 131
Di-n-octyl phthalate	<0.20		1.56	1.56		mg/Kg	☼	100	68 - 134
Benzo[b]fluoranthene	0.084		1.56	1.94		mg/Kg	☼	119	69 - 129
Benzo[k]fluoranthene	0.035	J	1.56	1.77		mg/Kg	☼	112	68 - 127
Benzo[a]pyrene	0.059		1.56	1.80		mg/Kg	☼	112	65 - 133
Indeno[1,2,3-cd]pyrene	0.031	J	1.56	1.28		mg/Kg	☼	80	68 - 130
Dibenz(a,h)anthracene	<0.039		1.56	1.28		mg/Kg	☼	82	64 - 131
Benzo[g,h,i]perylene	0.046	F1	1.56	1.10	F1	mg/Kg	☼	67	72 - 131
3 & 4 Methylphenol	<0.20		1.56	1.77		mg/Kg	☼	113	57 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorophenol	*92*		*31 - 166*
Phenol-d5	*98*		*30 - 153*
Nitrobenzene-d5	*81*		*37 - 147*
2-Fluorobiphenyl	*77*		*43 - 145*
2,4,6-Tribromophenol	*89*		*31 - 143*
Terphenyl-d14	*96*		*42 - 157*

Lab Sample ID: 500-165362-1 MSD — **Client Sample ID: 2787V-30-B01 (0-4)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492714 — **Prep Batch: 492507**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	<0.20		1.56	1.53		mg/Kg	☼	99	56 - 122	2	30
Bis(2-chloroethyl)ether	<0.20		1.56	1.18		mg/Kg	☼	76	55 - 111	10	30
1,3-Dichlorobenzene	<0.20		1.56	1.15		mg/Kg	☼	74	60 - 110	3	30
1,4-Dichlorobenzene	<0.20		1.56	1.14		mg/Kg	☼	74	61 - 110	4	30
1,2-Dichlorobenzene	<0.20		1.56	1.17		mg/Kg	☼	75	62 - 110	6	30
2-Methylphenol	<0.20		1.56	1.58		mg/Kg	☼	102	60 - 120	6	30

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: 500-165362-1 MSD
Matrix: Solid
Analysis Batch: 492714

Client Sample ID: 2787V-30-B01 (0-4)
Prep Type: Total/NA
Prep Batch: 492507

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,2'-oxybis[1-chloropropane]	<0.20	F1	1.56	1.78		mg/Kg	☼	114	40 - 124	11	30
N-Nitrosodi-n-propylamine	<0.078		1.56	1.44		mg/Kg	☼	93	56 - 118	4	30
Hexachloroethane	<0.20	F1	1.56	0.878	F1	mg/Kg	☼	56	60 - 114	8	30
2-Chlorophenol	<0.20		1.56	1.39		mg/Kg	☼	89	64 - 110	6	30
Nitrobenzene	<0.039		1.56	1.30		mg/Kg	☼	84	60 - 116	3	30
Bis(2-chloroethoxy)methane	<0.20		1.56	1.28		mg/Kg	☼	82	60 - 112	5	30
1,2,4-Trichlorobenzene	<0.20		1.56	1.25		mg/Kg	☼	80	66 - 117	3	30
Isophorone	<0.20		1.56	1.24		mg/Kg	☼	80	55 - 110	5	30
2,4-Dimethylphenol	<0.39		1.56	1.38		mg/Kg	☼	88	60 - 110	3	30
Hexachlorobutadiene	<0.20		1.56	1.21		mg/Kg	☼	78	56 - 120	5	30
Naphthalene	0.018	J	1.56	1.25		mg/Kg	☼	79	63 - 110	2	30
2,4-Dichlorophenol	<0.39		1.56	1.43		mg/Kg	☼	92	58 - 120	5	30
4-Chloroaniline	<0.78		1.56	1.04		mg/Kg	☼	67	30 - 150	7	30
2,4,6-Trichlorophenol	<0.39		1.56	1.38		mg/Kg	☼	88	57 - 120	4	30
2,4,5-Trichlorophenol	<0.39		1.56	1.39		mg/Kg	☼	90	50 - 120	3	30
Hexachlorocyclopentadiene	<0.78	F1	1.56	<0.78	F1	mg/Kg	☼	0	10 - 133	NC	30
2-Methylnaphthalene	0.053	J	1.56	1.33		mg/Kg	☼	82	69 - 112	0	30
2-Nitroaniline	<0.20		1.56	1.33		mg/Kg	☼	85	57 - 124	6	30
2-Chloronaphthalene	<0.20		1.56	1.26		mg/Kg	☼	81	69 - 114	3	30
4-Chloro-3-methylphenol	<0.39		1.56	1.39		mg/Kg	☼	89	65 - 122	5	30
2,6-Dinitrotoluene	<0.20		1.56	1.34		mg/Kg	☼	86	70 - 123	7	30
2-Nitrophenol	<0.39		1.56	1.28		mg/Kg	☼	82	60 - 120	6	30
3-Nitroaniline	<0.39		1.56	1.37		mg/Kg	☼	88	40 - 122	5	30
Dimethyl phthalate	<0.20		1.56	1.32		mg/Kg	☼	85	69 - 116	4	30
2,4-Dinitrophenol	<0.78	F1	3.11	<0.78	F1	mg/Kg	☼	0	10 - 100	NC	30
Acenaphthylene	<0.039		1.56	1.27		mg/Kg	☼	82	68 - 120	3	30
2,4-Dinitrotoluene	<0.20		1.56	1.31		mg/Kg	☼	84	69 - 124	4	30
Acenaphthene	<0.039		1.56	1.28		mg/Kg	☼	82	65 - 124	3	30
Dibenzofuran	<0.20		1.56	1.30		mg/Kg	☼	84	66 - 115	1	30
4-Nitrophenol	<0.78		3.11	3.22		mg/Kg	☼	104	30 - 122	4	30
Fluorene	<0.039		1.56	1.32		mg/Kg	☼	85	62 - 120	3	30
4-Nitroaniline	<0.39		1.56	1.49		mg/Kg	☼	96	60 - 160	1	30
4-Bromophenyl phenyl ether	<0.20		1.56	1.44		mg/Kg	☼	92	68 - 118	3	30
Hexachlorobenzene	<0.078		1.56	1.45		mg/Kg	☼	93	63 - 124	4	30
Diethyl phthalate	<0.20		1.56	1.42		mg/Kg	☼	91	58 - 120	1	30
4-Chlorophenyl phenyl ether	<0.20		1.56	1.35		mg/Kg	☼	87	62 - 119	3	30
Pentachlorophenol	<0.78		3.11	1.70		mg/Kg	☼	55	13 - 112	27	30
N-Nitrosodiphenylamine	<0.20		1.56	1.42		mg/Kg	☼	92	65 - 112	4	30
4,6-Dinitro-2-methylphenol	<0.78	F2	3.11	0.344	J F2	mg/Kg	☼	11	10 - 110	43	30
Phenanthrene	0.11		1.56	1.48		mg/Kg	☼	88	62 - 120	8	30
Anthracene	0.013	J	1.56	1.41		mg/Kg	☼	90	70 - 114	5	30
Carbazole	<0.20	*	1.56	1.60		mg/Kg	☼	103	65 - 142	2	30
Di-n-butyl phthalate	<0.20		1.56	1.42		mg/Kg	☼	91	65 - 120	0	30
Fluoranthene	0.11		1.56	1.52		mg/Kg	☼	91	62 - 120	11	30
Pyrene	0.10		1.56	1.49		mg/Kg	☼	89	61 - 128	9	30
Butyl benzyl phthalate	<0.20		1.56	1.46		mg/Kg	☼	94	71 - 129	4	30
Benzo[a]anthracene	0.055		1.56	1.51		mg/Kg	☼	93	67 - 122	7	30
Chrysene	0.082		1.56	1.58		mg/Kg	☼	96	63 - 120	9	30
3,3'-Dichlorobenzidine	<0.20	F1 F2	1.56	0.631	F2	mg/Kg	☼	41	35 - 128	67	30

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: 500-165362-1 MSD — **Client Sample ID: 2787V-30-B01 (0-4)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492714 — **Prep Batch: 492507**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate	<0.20		1.56	1.51		mg/Kg	☼	97	72 - 131	2	30
Di-n-octyl phthalate	<0.20		1.56	1.51		mg/Kg	☼	97	68 - 134	3	30
Benzo[b]fluoranthene	0.084		1.56	1.80		mg/Kg	☼	110	69 - 129	7	30
Benzo[k]fluoranthene	0.035	J	1.56	1.71		mg/Kg	☼	107	68 - 127	4	30
Benzo[a]pyrene	0.059		1.56	1.71		mg/Kg	☼	106	65 - 133	5	30
Indeno[1,2,3-cd]pyrene	0.031	J	1.56	1.18		mg/Kg	☼	74	68 - 130	8	30
Dibenz(a,h)anthracene	<0.039		1.56	1.24		mg/Kg	☼	80	64 - 131	3	30
Benzo[g,h,i]perylene	0.046	F1	1.56	0.987	F1	mg/Kg	☼	60	72 - 131	11	30
3 & 4 Methylphenol	<0.20		1.56	1.64		mg/Kg	☼	105	57 - 120	8	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorophenol	*86*		*31 - 166*
Phenol-d5	*88*		*30 - 153*
Nitrobenzene-d5	*75*		*37 - 147*
2-Fluorobiphenyl	*73*		*43 - 145*
2,4,6-Tribromophenol	*79*		*31 - 143*
Terphenyl-d14	*91*		*42 - 157*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-491462/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 491810 — **Prep Batch: 491462**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.0		2.0	0.39	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Arsenic	<1.0		1.0	0.34	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Barium	0.156	J	1.0	0.11	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Beryllium	<0.40		0.40	0.093	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Boron	<5.0		5.0	0.47	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Cadmium	0.0579	J	0.20	0.036	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Calcium	19.6	J	20	3.4	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Chromium	<1.0		1.0	0.50	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Cobalt	<0.50		0.50	0.13	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Copper	<1.0		1.0	0.28	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Iron	18.2	J	20	10	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Lead	<0.50		0.50	0.23	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Magnesium	14.3		10	5.0	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Manganese	0.182	J	1.0	0.15	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Nickel	<1.0		1.0	0.29	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Potassium	<50		50	18	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Selenium	<1.0		1.0	0.59	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Silver	<0.50		0.50	0.13	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Sodium	<100		100	15	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Thallium	<1.0		1.0	0.50	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Vanadium	<0.50		0.50	0.12	mg/Kg		06/21/19 16:35	06/25/19 01:18	1
Zinc	<2.0		2.0	0.88	mg/Kg		06/21/19 16:35	06/25/19 01:18	1

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: LCS 500-491462/2-A
Matrix: Solid
Analysis Batch: 491810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 491462

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	46.8		mg/Kg		94	80 - 120
Arsenic	10.0	9.36		mg/Kg		94	80 - 120
Barium	200	197		mg/Kg		98	80 - 120
Beryllium	5.00	4.91		mg/Kg		98	80 - 120
Boron	100	85.9		mg/Kg		86	80 - 120
Cadmium	5.00	4.75		mg/Kg		95	80 - 120
Calcium	1000	979		mg/Kg		98	80 - 120
Chromium	20.0	19.8		mg/Kg		99	80 - 120
Cobalt	50.0	49.9		mg/Kg		100	80 - 120
Copper	25.0	24.1		mg/Kg		96	80 - 120
Iron	100	107		mg/Kg		107	80 - 120
Lead	10.0	9.29		mg/Kg		93	80 - 120
Magnesium	1000	972		mg/Kg		97	80 - 120
Manganese	50.0	49.4		mg/Kg		99	80 - 120
Nickel	50.0	49.5		mg/Kg		99	80 - 120
Potassium	1000	935		mg/Kg		93	80 - 120
Selenium	10.0	8.66		mg/Kg		87	80 - 120
Silver	5.00	4.50		mg/Kg		90	80 - 120
Sodium	1000	970		mg/Kg		97	80 - 120
Thallium	10.0	8.86		mg/Kg		89	80 - 120
Vanadium	50.0	48.3		mg/Kg		97	80 - 120
Zinc	50.0	49.3		mg/Kg		99	80 - 120

Lab Sample ID: LCS 500-492417/2-A
Matrix: Solid
Analysis Batch: 492795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492417

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.500	0.542		mg/L		108	80 - 120
Beryllium	0.0500	0.0536		mg/L		107	80 - 120
Boron	1.00	1.10		mg/L		110	80 - 120
Cadmium	0.0500	0.0531		mg/L		106	80 - 120
Chromium	0.200	0.217		mg/L		109	80 - 120
Cobalt	0.500	0.524		mg/L		105	80 - 120
Iron	1.00	1.12		mg/L		112	80 - 120
Lead	0.100	0.107		mg/L		107	80 - 120
Manganese	0.500	0.535		mg/L		107	80 - 120
Nickel	0.500	0.535		mg/L		107	80 - 120
Selenium	0.100	0.0951		mg/L		95	80 - 120
Silver	0.0500	0.0520		mg/L		104	80 - 120
Zinc	0.500	0.526		mg/L		105	80 - 120

Lab Sample ID: LCS 500-492418/2-A
Matrix: Solid
Analysis Batch: 492607

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.100	0.105		mg/L		105	80 - 120
Manganese	0.500	0.515		mg/L		103	80 - 120

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Method: 6010B - Metals (ICP)

Lab Sample ID: LB 500-492168/1-B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492795 — **Prep Batch: 492417**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.50		0.50	0.050	mg/L		06/27/19 14:52	06/28/19 14:33	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		06/27/19 14:52	06/28/19 14:33	1
Boron	<0.50		0.50	0.050	mg/L		06/27/19 14:52	06/28/19 14:33	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		06/27/19 14:52	06/28/19 14:33	1
Chromium	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 14:33	1
Cobalt	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 14:33	1
Iron	<0.40		0.40	0.20	mg/L		06/27/19 14:52	06/28/19 14:33	1
Lead	<0.0075		0.0075	0.0075	mg/L		06/27/19 14:52	06/28/19 14:33	1
Manganese	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 14:33	1
Nickel	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 14:33	1
Selenium	<0.050		0.050	0.020	mg/L		06/27/19 14:52	06/28/19 14:33	1
Silver	<0.025		0.025	0.010	mg/L		06/27/19 14:52	06/28/19 14:33	1
Zinc	0.0330	J	0.50	0.020	mg/L		06/27/19 14:52	06/28/19 14:33	1

Lab Sample ID: 500-165362-9 MS — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492795 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0907		0.500	0.989	F1	mg/L		180	75 - 125
Beryllium	-0.000170		0.0500	0.0500		mg/L		100	75 - 125
Boron	0.0222		1.00	1.18		mg/L		118	75 - 125
Cadmium	0.000310		0.0500	0.0492		mg/L		98	75 - 125
Chromium	0.000490		0.200	0.202		mg/L		101	75 - 125
Selenium	-0.00167		0.100	0.0956		mg/L		96	75 - 125
Silver	-0.000346		0.0500	0.0526		mg/L		105	75 - 125
Zinc	0.0226		0.500	0.611		mg/L		118	75 - 125

Lab Sample ID: 500-165362-9 MS — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492905 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	<0.025		0.500	0.540		mg/L		108	75 - 125
Iron	<0.40		1.00	1.23		mg/L		123	75 - 125
Lead	<0.0075		0.100	0.113		mg/L		113	75 - 125
Manganese	0.55		0.500	1.08		mg/L		105	75 - 125
Nickel	<0.025		0.500	0.528		mg/L		106	75 - 125

Lab Sample ID: 500-165362-9 DU — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492795 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Barium	0.0907		0.463	J F5	mg/L		135	20
Beryllium	-0.000170		<0.0040		mg/L		NC	20
Boron	0.0222		0.110	J	mg/L		NC	20
Cadmium	0.000310		<0.0050		mg/L		NC	20
Chromium	0.000490		<0.025		mg/L		NC	20

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: 500-165362-9 DU — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492795 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Selenium	-0.00167		<0.050		mg/L		NC	20
Silver	-0.000346		<0.025		mg/L		NC	20
Zinc	0.0226		0.131	J F5	mg/L		141	20

Lab Sample ID: 500-165362-9 DU — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492905 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cobalt	<0.025		<0.025		mg/L		NC	20
Iron	<0.40		<0.40		mg/L		NC	20
Lead	<0.0075		0.00791		mg/L		NC	20
Manganese	0.55		0.543		mg/L		2	20
Nickel	<0.025		<0.025		mg/L		NC	20

Lab Sample ID: LB 500-492169/1-B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: SPLP East**
Analysis Batch: 492607 — **Prep Batch: 492418**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.0075		0.0075	0.0075	mg/L		06/27/19 14:53	06/28/19 11:52	1
Manganese	<0.025		0.025	0.010	mg/L		06/27/19 14:53	06/28/19 11:52	1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: LCS 500-492417/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492835 — **Prep Batch: 492417**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.535		mg/L		107	80 - 120
Thallium	0.100	0.111		mg/L		111	80 - 120

Lab Sample ID: LB 500-492168/1-B — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492835 — **Prep Batch: 492417**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		06/27/19 14:52	06/28/19 19:18	1
Thallium	<0.0020		0.0020	0.0020	mg/L		06/27/19 14:52	06/28/19 19:18	1

Lab Sample ID: 500-165362-9 MS — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492835 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0060		0.500	0.567		mg/L		113	75 - 125
Thallium	<0.0020	^	0.100	0.112	^	mg/L		112	75 - 125

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: 500-165362-9 DU — **Client Sample ID: 2787V-38-B01 (0-1)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492835 — **Prep Batch: 492417**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0060		<0.0060		mg/L		NC	20
Thallium	<0.0020	^	<0.0020	^	mg/L		NC	20

Method: 7470A - TCLP Mercury

Lab Sample ID: MB 500-492557/12-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492869 — **Prep Batch: 492557**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		06/28/19 10:20	07/01/19 08:09	1

Lab Sample ID: LCS 500-492557/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492869 — **Prep Batch: 492557**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00209		mg/L		105	80 - 120

Lab Sample ID: LB 500-492168/1-C — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492869 — **Prep Batch: 492557**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		06/28/19 10:20	07/01/19 08:18	1

Lab Sample ID: 500-165362-8 MS — **Client Sample ID: 2787V-30-B03 (4-8)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492869 — **Prep Batch: 492557**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.00103		mg/L		103	75 - 125

Lab Sample ID: 500-165362-8 DU — **Client Sample ID: 2787V-30-B03 (4-8)**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 492869 — **Prep Batch: 492557**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 500-492353/12-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 492561 — **Prep Batch: 492353**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0056	mg/Kg		06/27/19 14:20	06/28/19 09:22	1

QC Sample Results

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

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

Lab Sample ID: LCS 500-492353/13-A
Matrix: Solid
Analysis Batch: 492561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 492353

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.167	0.154		mg/Kg		93	80 - 120		

Lab Sample ID: 500-165362-8 MS
Matrix: Solid
Analysis Batch: 492561

Client Sample ID: 2787V-30-B03 (4-8)
Prep Type: Total/NA
Prep Batch: 492353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.015	J	0.0851	0.0937		mg/Kg	☼	92	75 - 125		

Lab Sample ID: 500-165362-8 MSD
Matrix: Solid
Analysis Batch: 492561

Client Sample ID: 2787V-30-B03 (4-8)
Prep Type: Total/NA
Prep Batch: 492353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.015	J	0.0852	0.0965		mg/Kg	☼	96	75 - 125	3	20

Lab Sample ID: 500-165362-8 DU
Matrix: Solid
Analysis Batch: 492561

Client Sample ID: 2787V-30-B03 (4-8)
Prep Type: Total/NA
Prep Batch: 492353

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.015	J	0.0159	J	mg/Kg	☼	6	20

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B01 (0-4)
Date Collected: 06/19/19 09:55
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:16	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 14:41	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:25	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:20	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 15:46		
					(End)	06/25/19 15:51		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B01 (0-4)
Date Collected: 06/19/19 09:55
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-1
Matrix: Solid
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 15:09	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 14:34	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 02:43	JEF	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:34	MJG	TAL CHI

Client Sample ID: 2787V-30-B01 (4-8)
Date Collected: 06/19/19 10:00
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:20	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 14:45	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:29	FXG	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B01 (4-8)
Date Collected: 06/19/19 10:00
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:21	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 15:51		
					(End)	06/25/19 15:55		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B01 (4-8)
Date Collected: 06/19/19 10:00
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-2
Matrix: Solid
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 15:35	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 15:58	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 02:47	JEF	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 11:58	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:36	MJG	TAL CHI

Client Sample ID: 2787V-30-B02 (0-4)
Date Collected: 06/19/19 10:35
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:24	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 14:50	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:33	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:23	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 15:59		
					(End)	06/25/19 16:03		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B02 (0-4)
Date Collected: 06/19/19 10:35
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-3
Matrix: Solid
Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 16:01	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 16:25	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 02:51	JEF	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 12:02	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:39	MJG	TAL CHI

Client Sample ID: 2787V-30-B02 (4-8)
Date Collected: 06/19/19 11:00
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:28	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 14:54	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:36	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:28	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 16:03		
					(End)	06/25/19 16:07		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B02 (4-8)
Date Collected: 06/19/19 11:00
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-4
Matrix: Solid
Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 16:27	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 16:53	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 02:56	JEF	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B02 (4-8)
Lab Sample ID: 500-165362-4
Date Collected: 06/19/19 11:00
Matrix: Solid
Date Received: 06/19/19 14:05
Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 12:14	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:41	MJG	TAL CHI

Client Sample ID: 2787V-30-B04 (0-0.75)
Lab Sample ID: 500-165362-5
Date Collected: 06/19/19 12:00
Matrix: Solid
Date Received: 06/19/19 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:32	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 14:58	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:40	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:29	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 16:07		
					(End)	06/25/19 16:11		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B04 (0-0.75)
Lab Sample ID: 500-165362-5
Date Collected: 06/19/19 12:00
Matrix: Solid
Date Received: 06/19/19 14:05
Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 16:53	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		5	492848	07/01/19 15:34	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 03:00	JEF	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 12:18	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:43	MJG	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)
Date Collected: 06/19/19 12:25
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:36	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 15:02	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:44	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:31	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 16:11		
					(End)	06/25/19 16:15		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B03 (0-4)
Date Collected: 06/19/19 12:25
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-6
Matrix: Solid
Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 17:19	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 17:20	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 03:04	JEF	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 12:22	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:45	MJG	TAL CHI

Client Sample ID: 2787V-30-B03 (0-4)D
Date Collected: 06/19/19 12:27
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:40	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 15:06	JEF	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (0-4)D
Lab Sample ID: 500-165362-7
Date Collected: 06/19/19 12:27
Matrix: Solid
Date Received: 06/19/19 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:48	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:33	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 16:15		
					(End)	06/25/19 16:19		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B03 (0-4)D
Lab Sample ID: 500-165362-7
Date Collected: 06/19/19 12:27
Matrix: Solid
Date Received: 06/19/19 14:05
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 17:44	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 17:48	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 03:08	JEF	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 12:26	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:47	MJG	TAL CHI

Client Sample ID: 2787V-30-B03 (4-8)
Lab Sample ID: 500-165362-8
Date Collected: 06/19/19 12:35
Matrix: Solid
Date Received: 06/19/19 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:44	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 15:10	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 19:59	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:34	MJG	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-30-B03 (4-8)
Lab Sample ID: 500-165362-8
Date Collected: 06/19/19 12:35
Matrix: Solid
Date Received: 06/19/19 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Client Sample ID: 2787V-30-B03 (4-8)
Lab Sample ID: 500-165362-8
Date Collected: 06/19/19 12:35
Matrix: Solid
Date Received: 06/19/19 14:05
Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 18:10	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492714	06/29/19 18:15	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 03:12	JEF	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		5	491959	06/25/19 12:30	EEN	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 09:49	MJG	TAL CHI

Client Sample ID: 2787V-38-B01 (0-1)
Lab Sample ID: 500-165362-9
Date Collected: 06/19/19 11:20
Matrix: Solid
Date Received: 06/19/19 14:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			492169	06/26/19 13:45	GCA	TAL CHI
SPLP East	Prep	3010A			492418	06/27/19 14:53	BDE	TAL CHI
SPLP East	Analysis	6010B		1	492607	06/28/19 12:48	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492905	07/01/19 09:23	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6010B		1	492795	06/28/19 15:23	JEF	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	3010A			492417	06/27/19 14:52	BDE	TAL CHI
TCLP	Analysis	6020A		1	492835	06/28/19 20:03	FXG	TAL CHI
TCLP	Leach	1311			492168	06/26/19 13:45	GCA	TAL CHI
TCLP	Prep	7470A			492557	06/28/19 10:20	MJG	TAL CHI
TCLP	Analysis	7470A		1	492869	07/01/19 08:39	MJG	TAL CHI
Total/NA	Analysis	9045D		1	491906		SMO	TAL CHI
					(Start)	06/25/19 16:24		
					(End)	06/25/19 16:28		
Total/NA	Analysis	Moisture		1	491230	06/20/19 14:47	LWN	TAL CHI

Lab Chronicle

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Client Sample ID: 2787V-38-B01 (0-1)

Date Collected: 06/19/19 11:20
Date Received: 06/19/19 14:05

Lab Sample ID: 500-165362-9

Matrix: Solid
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			491588	06/19/19 17:37	WRE	TAL CHI
Total/NA	Analysis	8260B		1	492111	06/26/19 18:36	EMA	TAL CHI
Total/NA	Prep	3541			492507	06/28/19 08:10	DX	TAL CHI
Total/NA	Analysis	8270D		1	492848	07/01/19 17:53	AJD	TAL CHI
Total/NA	Prep	3050B			491462	06/21/19 16:35	BDE	TAL CHI
Total/NA	Analysis	6010B		1	491810	06/25/19 03:24	JEF	TAL CHI
Total/NA	Prep	7471B			492353	06/27/19 14:20	MJG	TAL CHI
Total/NA	Analysis	7471B		1	492561	06/28/19 10:02	MJG	TAL CHI

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Ecology and Environment, Inc.
Project/Site: IDOT - 176-001-WO 50

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
7470A	7470A	Solid	Mercury
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Route: FAI-94 at Montrose Avenue
Section: 267-0101.3-B-R
Contract No.: 62F95

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

Chain of Custody Record

Lab Job #: 500-165362

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 9.8

48hr.

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

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

Client: EHE
Client Project #: 1009341.0050.02
Project Name: 176-001-W050
Project Location/State: Chicago, IL
Lab Project #:
Sampler: E Fisher
Lab PM: R Wright

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

500-165362 COC

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: VOCs	SVOCs	TCLP/SPLP total metals	% solids pH	Comments
1		2787V-30-B01(0-4)	6/19/19	0955	2	S		X	X	X	X	
2		2787V-30-B01(4-8)		1000	2	S		X	X	X	X	
3		2787V-30-B02(0-4)		1035	2	S		X	X	X	X	
4		2787V-30-B02(4-8)		1100	2	S		X	X	X	X	
5		2787V-30-B04(0-0.75)		1200	2	S		X	X	X	X	
6		2787V-30-B03(0-4)		1225	2	S		X	X	X	X	
7		2787V-30-B03(0-4)D		1227	2	S		X	X	X	X	
8		2787V-30-B03(4-8)		1235	2	S		X	X	X	X	

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

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

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	EHE	6/19/19	1310	R Neal	TA	6/19/19	1310
R Neal	TA	6/19/19	1405	Pauline Buckley	TACHI	6/19/19	1405

Lab Courier: K
Shipped:
Hand Delivered:

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

Client Comments

Lab Comments:

TAL-4124-500 (1209)

7/3/2019

Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-165362-1

Login Number: 165362
List Number: 1
Creator: Buckley, Paula M

List Source: Eurofins TestAmerica, Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	9.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	