#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8 6274 East Avon-Lima Road, Avon, NY 14414-9516 P: (585) 226-5353 | F: (585) 226-8139 www.dec.ny.gov

Southpoint Cove LLC Robert Morgan 1080 Pittsford Victor Road Pittsford, NY 14534

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter

1440 Empire Boulevard, Penfield Monroe County, Site No.: C828135

Dear Robert Morgan (as the Certifying Party):

The Department has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: 07/16/2015 to 07/16/2016.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is 1 year(s), your next PRR is due on August 15, 2017. You will receive a reminder letter and updated certification form 45-days prior to the due date.

If you have any questions, or need additional forms, please contact me at 585-295-5349 or e-mail: danielle.miles@dec.ny.gov.

Damle Mils

Sincerely,

Danielle Miles Project Manager

ec:

Melissa Dorosky, NYSDOH Michael Spoleta, Spoleta Construction Peter Morton, Ravi Engineering Lynn Zicari, Ravi Engineering Bernette Schilling, NYSDEC





# Enclosure 2 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



Site	e No.	C828135	Site Details	Box 1	
Site	e Name	1440 Empire Boulevard			
City			Zip Code: 14580		
Rep	porting F	Period: July 16, 2015 to July 16, 2	016		
				YES	NO
1.	Is the i	nformation above correct?		X	
	If NO, i	nclude handwritten above or on a	separate sheet.		
2.		me or all of the site property been p amendment during this Reporting	sold, subdivided, merged, or undergone a g Period?		Ď.
3.		ere been any change of use at the NYCRR 375-1.11(d))?	site during this Reporting Period		ΣX
4.		any federal, state, and/or local perm at the property during this Reporting	nits (e.g., building, discharge) been issued g Period?		X
			ru 4, include documentation or evidence sly submitted with this certification form.		
5.	that de		ly submitted with this certification form.	X	
5.	that de	ocumentation has been previous	ly submitted with this certification form.	X Box 2	
5.	that de	ocumentation has been previous	ly submitted with this certification form.		NO
5.	Is the	ocumentation has been previous	ely submitted with this certification form.  ent?  use(s) listed below?	Box 2	
	Is the s	site currently undergoing developm	use(s) listed below?	Box 2 YES	NO
6. 7.	Is the Restrict	current site use consistent with the cted-Residential, Commercial, and ICs/ECs in place and functioning a DO NOT COMPLETE THE RES	use(s) listed below? Industrial as designed?  TION 6 OR 7 IS NO, sign and date below and T OF THIS FORM. Otherwise continue.	Box 2 YES	NO
6.	Is the Restrict	current site use consistent with the cted-Residential, Commercial, and ICs/ECs in place and functioning a DO NOT COMPLETE THE RES	use(s) listed below? Industrial as designed?  TION 6 OR 7 IS NO, sign and date below and	Box 2 YES	NO

			Box 2	2A
8. Has any new info	ormation revealed that assumptions mad	de in the Qualitative Evansure	YES	NO
Assessment rega	arding offsite contamination are no longe	er valid?		M
If you answered that documenta	YES to question 8, include documen tion has been previously submitted v	ntation or evidence with this certification form.		
Are the assumpti     (The Qualitative in the second content of the second content o	ions in the Qualitative Exposure Assessi Exposure Assessment must be certified	ment still valid? every five years)	ŽŠ	
if you answered updated Qualita	I NO to question 9, the Periodic Revie tive Exposure Assessment based on	w Report must include an the new assumptions.		
SITE NO. C828135			Box :	3
Description o	of Institutional Controls			
arcel	<u>Owner</u>	Institutional Control		
08.06-1-8.2	Southpoint Cove LLC	Ground Water Use Res Soil Management Plan	striction	
		Landuse Restriction		
		Building Use Restriction		
		Site Management Plan		
-requires the remedial nstitutional and engined -allows the use and de	ional control in the form of an environme party or site owner to complete and sub ering controls in accordance with Part 3 evelopment of the controlled property for t 375-1.8(g), although land use is subjec	mit to the Department a periodic 75-1.8 (h)(3); restricted residential, commercia	certification	of
-requires the remedial nstitutional and engined-allows the use and deuses as defined by Part-restricts the use of gramatiment as determined requires compliance where the site and details the step engineering controls relativitional Controls: It is plan includes, but an Excavation Plan where the contamination; provisions for the mai	party or site owner to complete and subering controls in accordance with Part 3 evelopment of the controlled property for the 375-1.8(g), although land use is subject oundwater as a source of potable or product by the NYSDOH or County DOH; with the Department approved Site Management in place and effective:  Environmental Easement The soil cover system.  It may not be limited to:  which details the provisions for management and inspection of the identifie	ental easement for the controlled part to the Department a periodic 75-1.8 (h)(3); restricted residential, commercial to local zoning laws; cess water, without necessary was agement Plan.  Ving: I use restrictions and engineering essary to ensure the following instructions are as the engineering controls; and	certification  al and indust  ater quality  controls fo  titutional an	of trial r the id/or
-requires the remedial nstitutional and engined allows the use and deuses as defined by Parti-restricts the use of grotreatment as determined requires compliance where the state and details the step engineering controls religineering Controls: It is plan includes, but an Excavation Plan where the steps necessary for	party or site owner to complete and subering controls in accordance with Part 3 evelopment of the controlled property for t 375-1.8(g), although land use is subject oundwater as a source of potable or product by the NYSDOH or County DOH; with the Department approved Site Manadan is required, which includes the following in a required, which includes the following in a required plan that identifies all part of the solid cover system. The soil cover system. It may not be limited to:	ental easement for the controlled part to the Department a periodic 75-1.8 (h)(3); restricted residential, commercial to local zoning laws; cess water, without necessary was agement Plan.  Ving: I use restrictions and engineering essary to ensure the following instructions are as the engineering controls; and	certification  al and indust  ater quality  controls fo  titutional an	of trial r the id/or
-requires the remedial institutional and engined allows the use and deuses as defined by Parti-restricts the use of grotreatment as determined requires compliance where the state and details the step engineering controls religineering Controls: It is plan includes, but an Excavation Plan where the steps necessary for	party or site owner to complete and subering controls in accordance with Part 3 evelopment of the controlled property for 375-1.8(g), although land use is subject to be a subject to the NYSDOH or County DOH; with the Department approved Site Management in place and effective:  Environmental Easement The soil cover system. It may not be limited to: Indicate the provisions for management and inspection of the identifier for the periodic reviews and certification	ental easement for the controlled position to the Department a periodic 75-1.8 (h)(3); restricted residential, commercial to local zoning laws; cess water, without necessary was agement Plan.  Ving: I use restrictions and engineering essary to ensure the following institution of future excavations in areas and engineering controls; and of the institutional and/or engineering	certification al and indust ater quality controls fo titutional an	of trial r the id/or

redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is required it will be a minimum

#### <u>Parcel</u>

#### **Engineering Control**

of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

		Box 5
Periodic Review Report (PRR) Certification Statements		
I certify by checking "YES" below that:		
<ul> <li>a) the Periodic Review report and all attachments were prepared under the direction reviewed by, the party making the certification;</li> </ul>	n of, and	
<ul> <li>to the best of my knowledge and belief, the work and conclusions described in the are in accordance with the requirements of the site remedial program, and generally</li> </ul>	nis certific	cation
, and the state of	YES	NO
	¥	
<ol> <li>If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for e or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that a following statements are true:</li> </ol>	ach Instit	utional
<ul> <li>(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchange Control was put in-place, or was last approved by the Department;</li> </ul>	d since th	ne date that the
<ul> <li>nothing has occurred that would impair the ability of such Control, to protect public healt the environment;</li> </ul>	h and	
<ul> <li>access to the site will continue to be provided to the Department, to evaluate the remedevaluate the continued maintenance of this Control;</li> </ul>	y, includii	ng access to
(d) nothing has occurred that would constitute a violation or failure to comply with the Site N Control; and	/lanagem	ent Plan for this
(e) if a financial assurance mechanism is required by the oversight document for the site, the and sufficient for its intended purpose established in the document.	ne mecha	ınism remains valid
	YES	NO
	Œ	
IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.		
A Corrective Measures Work Plan must be submitted along with this form to address t	hese iss	ues.

Signature of Owner, Remedial Party or Designated Representative

#### **IC CERTIFICATIONS** SITE NO. C828135

Box 6

# SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

print n	ame print business	address
am certifying as _	Designated Representative	(Owner or Remedial Party)
or the Site named	in the Site Details Section of this form.	
Jess	in the Site Details Section of this form.  Property or Designated Representatives.	7/6/16

#### IC/EC CERTIFICATIONS

Box 7

# **Professional Engineer Signature**

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

Jess D. Sudol, PE	at	Passero Associates	
print name		print business address	
am certifying as a Professional Engineer	r for the	Owner	
		(Owner or Remedia	al Party)
		OF NEW	
		DANIEL COM	
		(5)(5)	
		* ( )	
		A SOL	
		SEZ S	7/6/16
		10 po 92233 E	
Signature of Professional Engineer, for Remedial Party, Rendering Certification		ner or Stamp ONAL	Date ·



# **Technical Memorandum**

To: Danielle Miles, P. E.

NYSDEC Division of Environmental Remediation

From: Lynn Zicari

Feb 5, 2016

Ravi Engineering and Land Surveying, P.C.

Date: September 29, 2016

Project: 1440 Empire Blvd\_C828135 Site Management

Subject: Periodic Review Report

This report summarizes Site Management Plan activities for BCP Site No. C828135 completed from July 1, 2015 to July 1, 2016. The work included the excavation of two entire building footprints (Buildings 7 & 8) and a portion of one building (Building 9) to final grade, and installation of footers and foundations.

RE&LS was onsite whenever the soil cover system was breeched to provide oversight, CAMP (Community Air-Monitoring Plan) monitoring, and soil screening with a photoionizing detector (PID).

•	Oct 21-23, 2015	CAMP Monitoring and soil screening were provided for excavation of Building 9 (the small portion within BCP limits). Approximately 1000 cubic yards (cy) soil was generated: 700 cy of soils containing ash and debris were segregated for disposal, and the remaining 300 cy was staged for potential reuse onsite.
•	Jan 20, 2016	CAMP Monitoring and soil screening was provided during the relocation of the soils generated during the utility installation in 2014 (approximately 868 cy). The utility pile soils were moved and staged for potential reuse onsite.
•	Jan 26-27 & Jan 29, 2016	CAMP Monitoring and oversight was provided for the Building 7 excavation. Approximately 2500 cy of soil was generated and staged for potential reuse, and 200 cy segregated for disposal.
•	Feb 4-5, 2016	Building 9 segregated soils generated on 10/21-23/15 were hauled

• Feb 4-5, 2016 Building 9 segregated soils generated on 10/21-23/15 were hauled offsite for disposal.

CAMP Monitoring and oversight was provided for continued excavation of Building 7. Approximately 700 cy of soil generated for potential reuse, and approximately 70 cy segregated for disposal.

Danielle Miles, P.E., NYSDEC Page 2 of 2 September 9, 2016

•	Feb 12, 2016	CAMP Monitoring and oversight were provided for excavation of Building 7. Approximately 550 cy of soil was segregated for disposal. Soil samples were collected from the segregated soil pile and from the piles intended for onsite reuse
•	Mar 15-16 Mar 21 & 23	CAMP Monitoring and oversight were provided for continued excavation of Building 7. Approximately 729 cy of soil was generated and staged for potential reuse onsite.
•	Apr 11-15, 2016	CAMP Monitoring and oversight was provided for excavation of Building 8. Samples were collected from staged piles for reuse onsite.

During BCP, if not already moist from natural conditions, the soils were wetted to prevent fugitive dust migration. At no time were there any visible emissions from contaminated soils, though emissions were observed from the cover soils or clean soil piles. There were no other issues involving Site work.

Subject: Building 7 excavation summary

- RAVI was on site during the excavation of contaminated soils from beneath the cover system in the building 7 footprint on January 20, 26, 27, 29, February 5, 8, and 12, 2016.
   CAMP monitoring was performed whenever we were onsite, and continued until intrusive activities were complete for the day. Soils were screened with a photoionization detector (PID) for volatile organic compound (VOC) vapors.
- Soils were segregated and sampled based on appearance, odor, or PID readings:

Soils that were stained, had elevated PID readings, petroleum odors, or contained solid waste other than brick, block, or glass were staged on plastic for disposal. Approximately 525 cubic yards (CYs) of soil and fill materials were sampled for disposal and removed from the Site on February 4 and 5, 2016.

Clean-appearing soils were staged separately from the above soils, and sampled for reuse in accordance with DER 10 Table 5.4(e)10. Soils for potential reuse were staged as four discreet piles, but sampled as one waste stream. The total volume of soil generated was 4037 CYs.

• Sample methodology:

Samples were collected on 2/12/16 after excavation was complete:

A shovel was used to dig approximately 3-4 feet deep from equidistant locations on each pile at varying heights; samples were collected by hand and placed directly into 2-ounce sample jars, packed tightly with no headspace, and held on ice.

Fifteen discrete samples were collected: three discrete samples were collected from each of the three smallest piles, and six samples were collected from the largest pile as this pile was approximately two times the size of the other piles.

Of these samples, 13 samples were submitted for VOC analysis: the 15 discrete samples were composited at the lab for a total of five composite samples. The composite samples were analyzed for SVOCs, inorganics, PCBs, and pesticides. Each composite sample was comprised of three discrete samples.

 Samples were relinquished to Paradigm Environmental Services on 2/12/16 and analyzed for TCL & CP – 51 VOCs & SVOCs, TAL metals, pesticides, PCBs, Silvex, herbicides, and TCN.



# **Technical Memorandum**

To: Matt Gillette

NYSDEC Division of Environmental Remediation

From: Lynn Zicari

Ravi Engineering and Land Surveying, P.C.

Date: April 29, 2016

Project: 1440 Empire Blvd\_C828135 Site Management

Subject: Building 8 Excavation Summary

Ravi Engineering and Land Surveying, P.C. (RE&LS) was on Site during the excavation of contaminated soils from beneath the cover system in the Building 8 footprint from April 11-15, 2016. CAMP monitoring was performed whenever we were onsite, and continued until intrusive activities were complete for the day. Soils were screened with a photoionization detector (PID) for volatile organic compound (VOC) vapors.

All excavated soil was stained black, but it was unclear if this was due to natural conditions or from Site impacts. No debris, cinders, or ash were encountered. PID readings were mostly 0.00 ppm; however, elevated readings ranged from 12.0 ppm to 250 ppm above background. Soils did not exhibit odors; however, minor odors were noted in areas with elevated PID readings.

Approximately 1,286 cubic yards (CYs) of soil was sampled for reuse onsite in accordance with DER 10 Table 5.4 (e) 10.

#### **Sample Methodology**

Samples were collected daily during soil excavation; they were collected by hand directly from the pile, and placed into 2-ounce sample jars, packed tightly with no headspace, and held on ice.

Nine discrete samples were collected and submitted for VOC analysis: the nine discrete samples were composited at the laboratory into two composite samples. One additional composite sample was sample was also collected. The three composite samples were analyzed for semi-volatile organic compounds (SVOCs), inorganics, polychlorinated biphenyls (PCBs), and pesticides. One composite sample was comprised of four discrete samples; one composite sample was comprised of the other five discrete samples; and the last composite sample was collected directly from the pile.

 $1440\ Empire\ Blvd\_C828135\_Building\ 8\ Excavation\ Summary\ May\ 5,\ 2016$ 

Samples were relinquished to Paradigm Environmental Services on 4/19/16 and analyzed for Target Compound List (TCL) & Commissioner's Policy 51 (CP – 51) VOCs & SVOCs, Part 375 metals, pesticides, PCBs, and Silvex.

Lynn Zicari
Environmental Technician
<a href="mailto:lzicari@ravieng.com">lzicari@ravieng.com</a>
585-697-2071

Attachment 1: Laboratory Analysis

Sample Location Map-Building 8 excavation Samples Collected 4-11 through 4-15, 2016



Asterisks (\*) indicate a composite sample:

C-8.1 composite was collected from between the discrete samples

C-8.2 consists of samples 8R-1.1, 1.2, 1.3,1.4

C-8.3 consists of samples 8R-2.1, 2.3, 2.4, 2.6, and 2.8.

Map data ©2016 Google 20 ft ∟

# Attachment 1 Laboratory Analysis



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.1

 Lab Sample ID:
 161505-01
 Date Sampled:
 4/11/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.09	ug/Kg		4/20/2016 16:25
1,1,2,2-Tetrachloroethane	< 4.09	ug/Kg		4/20/2016 16:25
1,1,2-Trichloroethane	< 4.09	ug/Kg		4/20/2016 16:25
1,1-Dichloroethane	< 4.09	ug/Kg		4/20/2016 16:25
1,1-Dichloroethene	< 4.09	ug/Kg		4/20/2016 16:25
1,2,3-Trichlorobenzene	< 10.2	ug/Kg		4/20/2016 16:25
1,2,4-Trichlorobenzene	< 10.2	ug/Kg		4/20/2016 16:25
1,2,4-Trimethylbenzene	< 4.09	ug/Kg		4/20/2016 16:25
1,2-Dibromo-3-Chloropropane	< 20.4	ug/Kg		4/20/2016 16:25
1,2-Dibromoethane	< 4.09	ug/Kg		4/20/2016 16:25
1,2-Dichlorobenzene	< 4.09	ug/Kg		4/20/2016 16:25
1,2-Dichloroethane	< 4.09	ug/Kg		4/20/2016 16:25
1,2-Dichloropropane	< 4.09	ug/Kg		4/20/2016 16:25
1,3,5-Trimethylbenzene	< 4.09	ug/Kg		4/20/2016 16:25
1,3-Dichlorobenzene	< 4.09	ug/Kg		4/20/2016 16:25
1,4-Dichlorobenzene	< 4.09	ug/Kg		4/20/2016 16:25
1,4-dioxane	< 40.9	ug/Kg		4/20/2016 16:25
2-Butanone	< 20.4	ug/Kg		4/20/2016 16:25
2-Hexanone	< 10.2	ug/Kg		4/20/2016 16:25
4-Methyl-2-pentanone	< 10.2	ug/Kg		4/20/2016 16:25
Acetone	17.1	ug/Kg	J	4/20/2016 16:25
Benzene	< 4.09	ug/Kg		4/20/2016 16:25
Bromochloromethane	< 10.2	ug/Kg		4/20/2016 16:25
Bromodichloromethane	< 4.09	ug/Kg		4/20/2016 16:25
Bromoform	< 10.2	ug/Kg		4/20/2016 16:25
Bromomethane	< 4.09	ug/Kg		4/20/2016 16:25
Carbon disulfide	< 4.09	ug/Kg		4/20/2016 16:25



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject Reference:	1440 Empire B	oivu			
Sample Identifier:	8R-1.1				
Lab Sample ID:	161505-01			Date Sampled:	4/11/2016
Matrix:	Soil			Date Received:	4/19/2016
Carbon Tetrachloride		< 4.09	ug/Kg		4/20/2016 16:
Chlorobenzene		< 4.09	ug/Kg		4/20/2016 16:
Chloroethane		< 4.09	ug/Kg		4/20/2016 16:
Chloroform		< 4.09	ug/Kg		4/20/2016 16:
Chloromethane		< 4.09	ug/Kg		4/20/2016 16:
cis-1,2-Dichloroethene		5.82	ug/Kg		4/20/2016 16:
cis-1,3-Dichloropropene		< 4.09	ug/Kg		4/20/2016 16:
Cyclohexane		< 20.4	ug/Kg		4/20/2016 16:
Dibromochloromethane		< 4.09	ug/Kg		4/20/2016 16:
Dichlorodifluoromethan	e	< 4.09	ug/Kg		4/20/2016 16:
Ethylbenzene		< 4.09	ug/Kg		4/20/2016 16:
Freon 113		< 4.09	ug/Kg		4/20/2016 16:
Isopropylbenzene		< 4.09	ug/Kg		4/20/2016 16:
m,p-Xylene		< 4.09	ug/Kg		4/20/2016 16:
Methyl acetate		< 4.09	ug/Kg		4/20/2016 16:
Methyl tert-butyl Ether		< 4.09	ug/Kg		4/20/2016 16:
Methylcyclohexane		< 4.09	ug/Kg		4/20/2016 16:
Methylene chloride		< 10.2	ug/Kg		4/20/2016 16:
Naphthalene		< 10.2	ug/Kg		4/20/2016 16:
n-Butylbenzene		< 4.09	ug/Kg		4/20/2016 16:
n-Propylbenzene		< 4.09	ug/Kg		4/20/2016 16:
o-Xylene		< 4.09	ug/Kg		4/20/2016 16:
p-Isopropyltoluene		< 4.09	ug/Kg		4/20/2016 16:
sec-Butylbenzene		< 4.09	ug/Kg		4/20/2016 16:
Styrene		< 10.2	ug/Kg		4/20/2016 16:
tert-Butylbenzene		< 4.09	ug/Kg		4/20/2016 16:
Tetrachloroethene		< 4.09	ug/Kg		4/20/2016 16:
Toluene		< 4.09	ug/Kg		4/20/2016 16:
trans-1,2-Dichloroethen	e	< 4.09	ug/Kg		4/20/2016 16:
trans-1,3-Dichloroprope	ne	< 4.09	ug/Kg		4/20/2016 16:
·			-		



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.1

 Lab Sample ID:
 161505-01
 Date Sampled:
 4/11/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

 Trichloroethene
 9.31
 ug/Kg
 4/20/2016
 16:25

 Trichlorofluoromethane
 < 4.09</td>
 ug/Kg
 4/20/2016
 16:25

 Vinyl chloride
 < 4.09</td>
 ug/Kg
 4/20/2016
 16:25

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<u>Date Analyzed</u>	
1,2-Dichloroethane-d4	135	85.4 - 122	*	4/20/2016	16:25
4-Bromofluorobenzene	78.7	81.1 - 115	*	4/20/2016	16:25
Pentafluorobenzene	110	90.7 - 109	*	4/20/2016	16:25
Toluene-D8	97.8	88.5 - 110		4/20/2016	16:25

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C

EPA 5035

Data File: x31766.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.2

 Lab Sample ID:
 161505-02
 Date Sampled:
 4/11/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

Analyte	<u>Result</u>	<u>Units</u>	Qualifier	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.38	ug/Kg		4/20/2016 16:49
1,1,2,2-Tetrachloroethane	< 4.38	ug/Kg		4/20/2016 16:49
1,1,2-Trichloroethane	< 4.38	ug/Kg		4/20/2016 16:49
1,1-Dichloroethane	< 4.38	ug/Kg		4/20/2016 16:49
1,1-Dichloroethene	< 4.38	ug/Kg		4/20/2016 16:49
1,2,3-Trichlorobenzene	< 11.0	ug/Kg		4/20/2016 16:49
1,2,4-Trichlorobenzene	< 11.0	ug/Kg		4/20/2016 16:49
1,2,4-Trimethylbenzene	< 4.38	ug/Kg		4/20/2016 16:49
1,2-Dibromo-3-Chloropropane	< 21.9	ug/Kg		4/20/2016 16:49
1,2-Dibromoethane	< 4.38	ug/Kg		4/20/2016 16:49
1,2-Dichlorobenzene	< 4.38	ug/Kg		4/20/2016 16:49
1,2-Dichloroethane	< 4.38	ug/Kg		4/20/2016 16:49
1,2-Dichloropropane	< 4.38	ug/Kg		4/20/2016 16:49
1,3,5-Trimethylbenzene	< 4.38	ug/Kg		4/20/2016 16:49
1,3-Dichlorobenzene	< 4.38	ug/Kg		4/20/2016 16:49
1,4-Dichlorobenzene	< 4.38	ug/Kg		4/20/2016 16:49
1,4-dioxane	< 43.8	ug/Kg		4/20/2016 16:49
2-Butanone	< 21.9	ug/Kg		4/20/2016 16:49
2-Hexanone	< 11.0	ug/Kg		4/20/2016 16:49
4-Methyl-2-pentanone	< 11.0	ug/Kg		4/20/2016 16:49
Acetone	44.8	ug/Kg		4/20/2016 16:49
Benzene	< 4.38	ug/Kg		4/20/2016 16:49
Bromochloromethane	< 11.0	ug/Kg		4/20/2016 16:49
Bromodichloromethane	< 4.38	ug/Kg		4/20/2016 16:49
Bromoform	< 11.0	ug/Kg		4/20/2016 16:49
Bromomethane	< 4.38	ug/Kg		4/20/2016 16:49
Carbon disulfide	< 4.38	ug/Kg		4/20/2016 16:49



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

	1440 Empire L	nvu				
Sample Identifier:	8R-1.2					
Lab Sample ID:	161505-02			Date Sampled:	4/11/2016	
Matrix:	Soil			Date Received:	4/19/2016	
Carbon Tetrachloride		< 4.38	ug/Kg		4/20/2016	16:49
Chlorobenzene		< 4.38	ug/Kg		4/20/2016	16:49
Chloroethane		< 4.38	ug/Kg		4/20/2016	16:49
Chloroform		< 4.38	ug/Kg		4/20/2016	16:49
Chloromethane		< 4.38	ug/Kg		4/20/2016	16:49
cis-1,2-Dichloroethene		6.09	ug/Kg		4/20/2016	16:49
cis-1,3-Dichloropropene		< 4.38	ug/Kg		4/20/2016	16:49
Cyclohexane		< 21.9	ug/Kg		4/20/2016	16:49
Dibromochloromethane		< 4.38	ug/Kg		4/20/2016	16:49
Dichlorodifluoromethan	e	< 4.38	ug/Kg		4/20/2016	16:49
Ethylbenzene		< 4.38	ug/Kg		4/20/2016	16:49
Freon 113		< 4.38	ug/Kg		4/20/2016	16:49
Isopropylbenzene		< 4.38	ug/Kg		4/20/2016	16:49
m,p-Xylene		< 4.38	ug/Kg		4/20/2016	16:49
Methyl acetate		< 4.38	ug/Kg		4/20/2016	16:49
Methyl tert-butyl Ether		< 4.38	ug/Kg		4/20/2016	16:49
Methylcyclohexane		< 4.38	ug/Kg		4/20/2016	16:49
Methylene chloride		< 11.0	ug/Kg		4/20/2016	16:49
Naphthalene		< 11.0	ug/Kg		4/20/2016	16:49
n-Butylbenzene		< 4.38	ug/Kg		4/20/2016	16:49
n-Propylbenzene		< 4.38	ug/Kg		4/20/2016	16:49
o-Xylene		< 4.38	ug/Kg		4/20/2016	16:49
p-Isopropyltoluene		3.04	ug/Kg	J	4/20/2016	16:49
sec-Butylbenzene		< 4.38	ug/Kg		4/20/2016	16:49
Styrene		< 11.0	ug/Kg		4/20/2016	16:49
tert-Butylbenzene		< 4.38	ug/Kg		4/20/2016	16:49
Tetrachloroethene		< 4.38	ug/Kg		4/20/2016	16:49
Toluene		< 4.38	ug/Kg		4/20/2016	16:49
trans-1,2-Dichloroethen	e	< 4.38	ug/Kg		4/20/2016	16:49
trans-1,3-Dichloroprope	ne	< 4.38	ug/Kg		4/20/2016	16:49



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.2

 Lab Sample ID:
 161505-02
 Date Sampled:
 4/11/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

 Trichloroethene
 11.1
 ug/Kg
 4/20/2016
 16:49

 Trichlorofluoromethane
 < 4.38</td>
 ug/Kg
 4/20/2016
 16:49

 Vinyl chloride
 < 4.38</td>
 ug/Kg
 4/20/2016
 16:49

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	zed
1,2-Dichloroethane-d4	129	85.4 - 122	*	4/20/2016	16:49
4-Bromofluorobenzene	76.9	81.1 - 115	*	4/20/2016	16:49
Pentafluorobenzene	108	90.7 - 109		4/20/2016	16:49
Toluene-D8	96.4	88.5 - 110		4/20/2016	16:49

Internal standard outliers indicate probable matrix interference

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x31767.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.3

 Lab Sample ID:
 161505-03
 Date Sampled:
 4/13/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

Analyte	<u>Result</u>	<u>Units</u>	Qualifier	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.08	ug/Kg		4/20/2016 17:13
1,1,2,2-Tetrachloroethane	< 4.08	ug/Kg		4/20/2016 17:13
1,1,2-Trichloroethane	< 4.08	ug/Kg		4/20/2016 17:13
1,1-Dichloroethane	< 4.08	ug/Kg		4/20/2016 17:13
1,1-Dichloroethene	< 4.08	ug/Kg		4/20/2016 17:13
1,2,3-Trichlorobenzene	< 10.2	ug/Kg		4/20/2016 17:13
1,2,4-Trichlorobenzene	< 10.2	ug/Kg		4/20/2016 17:13
1,2,4-Trimethylbenzene	< 4.08	ug/Kg		4/20/2016 17:13
1,2-Dibromo-3-Chloropropane	< 20.4	ug/Kg		4/20/2016 17:13
1,2-Dibromoethane	< 4.08	ug/Kg		4/20/2016 17:13
1,2-Dichlorobenzene	< 4.08	ug/Kg		4/20/2016 17:13
1,2-Dichloroethane	< 4.08	ug/Kg		4/20/2016 17:13
1,2-Dichloropropane	< 4.08	ug/Kg		4/20/2016 17:13
1,3,5-Trimethylbenzene	< 4.08	ug/Kg		4/20/2016 17:13
1,3-Dichlorobenzene	< 4.08	ug/Kg		4/20/2016 17:13
1,4-Dichlorobenzene	< 4.08	ug/Kg		4/20/2016 17:13
1,4-dioxane	< 40.8	ug/Kg		4/20/2016 17:13
2-Butanone	< 20.4	ug/Kg		4/20/2016 17:13
2-Hexanone	< 10.2	ug/Kg		4/20/2016 17:13
4-Methyl-2-pentanone	< 10.2	ug/Kg		4/20/2016 17:13
Acetone	< 20.4	ug/Kg		4/20/2016 17:13
Benzene	< 4.08	ug/Kg		4/20/2016 17:13
Bromochloromethane	< 10.2	ug/Kg		4/20/2016 17:13
Bromodichloromethane	< 4.08	ug/Kg		4/20/2016 17:13
Bromoform	< 10.2	ug/Kg		4/20/2016 17:13
Bromomethane	< 4.08	ug/Kg		4/20/2016 17:13
Carbon disulfide	< 4.08	ug/Kg		4/20/2016 17:13



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Project Reference:	1440 Empire I	3lvd				
Sample Identifier:	8R-1.3					
Lab Sample ID:	161505-03			Date Sampled:	4/13/2016	
Matrix:	Soil			Date Received:	4/19/2016	
Carbon Tetrachloride		< 4.08	ug/Kg		4/20/2016	17:13
Chlorobenzene		< 4.08	ug/Kg		4/20/2016	17:13
Chloroethane		< 4.08	ug/Kg		4/20/2016	17:13
Chloroform		< 4.08	ug/Kg		4/20/2016	17:13
Chloromethane		< 4.08	ug/Kg		4/20/2016	17:13
cis-1,2-Dichloroethene	<b>!</b>	< 4.08	ug/Kg		4/20/2016	17:13
cis-1,3-Dichloroproper	ne	< 4.08	ug/Kg		4/20/2016	17:13
Cyclohexane		< 20.4	ug/Kg		4/20/2016	17:13
Dibromochloromethan	ie	< 4.08	ug/Kg		4/20/2016	17:13
Dichlorodifluorometha	nne	< 4.08	ug/Kg		4/20/2016	17:13
Ethylbenzene		< 4.08	ug/Kg		4/20/2016	17:13
Freon 113		< 4.08	ug/Kg		4/20/2016	17:13
Isopropylbenzene		< 4.08	ug/Kg		4/20/2016	17:13
m,p-Xylene		< 4.08	ug/Kg		4/20/2016	17:13
Methyl acetate		< 4.08	ug/Kg		4/20/2016	17:13
Methyl tert-butyl Ethe	r	< 4.08	ug/Kg		4/20/2016	17:13
Methylcyclohexane		< 4.08	ug/Kg		4/20/2016	17:13
Methylene chloride		< 10.2	ug/Kg		4/20/2016	17:13
Naphthalene		< 10.2	ug/Kg		4/20/2016	17:13
n-Butylbenzene		< 4.08	ug/Kg		4/20/2016	17:13
n-Propylbenzene		< 4.08	ug/Kg		4/20/2016	17:13
o-Xylene		< 4.08	ug/Kg		4/20/2016	17:13
p-Isopropyltoluene		< 4.08	ug/Kg		4/20/2016	17:13
sec-Butylbenzene		< 4.08	ug/Kg		4/20/2016	17:13
Styrene		< 10.2	ug/Kg		4/20/2016	17:13
tert-Butylbenzene		< 4.08	ug/Kg		4/20/2016	17:13
Tetrachloroethene		< 4.08	ug/Kg		4/20/2016	17:13
Toluene		< 4.08	ug/Kg		4/20/2016	17:13
trans-1,2-Dichloroethe	ene	< 4.08	ug/Kg		4/20/2016	17:13
trans-1,3-Dichloropro	pene	< 4.08	ug/Kg		4/20/2016	17:13



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.3

 Lab Sample ID:
 161505-03
 Date Sampled:
 4/13/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

 Trichloroethene
 < 4.08</td>
 ug/Kg
 4/20/2016
 17:13

 Trichlorofluoromethane
 < 4.08</td>
 ug/Kg
 4/20/2016
 17:13

 Vinyl chloride
 < 4.08</td>
 ug/Kg
 4/20/2016
 17:13

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>vzed</u>
1,2-Dichloroethane-d4	111	85.4 - 122		4/20/2016	17:13
4-Bromofluorobenzene	97.1	81.1 - 115		4/20/2016	17:13
Pentafluorobenzene	104	90.7 - 109		4/20/2016	17:13
Toluene-D8	99.1	88.5 - 110		4/20/2016	17:13

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x31768.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.4

 Lab Sample ID:
 161505-04
 Date Sampled:
 4/13/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.33	ug/Kg		4/20/2016 17:37
1,1,2,2-Tetrachloroethane	< 4.33	ug/Kg		4/20/2016 17:37
1,1,2-Trichloroethane	< 4.33	ug/Kg		4/20/2016 17:37
1,1-Dichloroethane	< 4.33	ug/Kg		4/20/2016 17:37
1,1-Dichloroethene	< 4.33	ug/Kg		4/20/2016 17:37
1,2,3-Trichlorobenzene	< 10.8	ug/Kg		4/20/2016 17:37
1,2,4-Trichlorobenzene	< 10.8	ug/Kg		4/20/2016 17:37
1,2,4-Trimethylbenzene	< 4.33	ug/Kg		4/20/2016 17:37
1,2-Dibromo-3-Chloropropane	< 21.7	ug/Kg		4/20/2016 17:37
1,2-Dibromoethane	< 4.33	ug/Kg		4/20/2016 17:37
1,2-Dichlorobenzene	< 4.33	ug/Kg		4/20/2016 17:37
1,2-Dichloroethane	< 4.33	ug/Kg		4/20/2016 17:37
1,2-Dichloropropane	< 4.33	ug/Kg		4/20/2016 17:37
1,3,5-Trimethylbenzene	< 4.33	ug/Kg		4/20/2016 17:37
1,3-Dichlorobenzene	< 4.33	ug/Kg		4/20/2016 17:37
1,4-Dichlorobenzene	< 4.33	ug/Kg		4/20/2016 17:37
1,4-dioxane	< 43.3	ug/Kg		4/20/2016 17:37
2-Butanone	< 21.7	ug/Kg		4/20/2016 17:37
2-Hexanone	< 10.8	ug/Kg		4/20/2016 17:37
4-Methyl-2-pentanone	< 10.8	ug/Kg		4/20/2016 17:37
Acetone	< 21.7	ug/Kg		4/20/2016 17:37
Benzene	< 4.33	ug/Kg		4/20/2016 17:37
Bromochloromethane	< 10.8	ug/Kg		4/20/2016 17:37
Bromodichloromethane	< 4.33	ug/Kg		4/20/2016 17:37
Bromoform	< 10.8	ug/Kg		4/20/2016 17:37
Bromomethane	< 4.33	ug/Kg		4/20/2016 17:37
Carbon disulfide	< 4.33	ug/Kg		4/20/2016 17:37



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

- ' '	Sample Identifier:	8R-1.4					
Carbon Tetrachloride	Lab Sample ID:	161505-04			Date Sampled:	4/13/2016	
Chlorobenzene	Matrix:	Soil			Date Received:	4/19/2016	
Chloroethane	Carbon Tetrachloride		< 4.33	ug/Kg		4/20/2016	17:3
Chloroform	Chlorobenzene		< 4.33	ug/Kg		4/20/2016	17:3
Chloromethane	Chloroethane		< 4.33	ug/Kg		4/20/2016	17:3
cis-1,2-Dichloroethene       < 4.33	Chloroform		< 4.33	ug/Kg		4/20/2016	17:3
cis-1,3-Dichloropropene       < 4.33	Chloromethane		< 4.33	ug/Kg		4/20/2016	17:3
Cyclohexane       < 21.7	cis-1,2-Dichloroethene		< 4.33	ug/Kg		4/20/2016	17:3
Dibromochloromethane         < 4.33	cis-1,3-Dichloropropene		< 4.33	ug/Kg		4/20/2016	17:3
Dichlorodifluoromethane       < 4.33	Cyclohexane		< 21.7	ug/Kg		4/20/2016	17:3
Ethylbenzene       < 4.33	Dibromochloromethane		< 4.33	ug/Kg		4/20/2016	17:3
Freon 113       < 4.33	Dichlorodifluoromethane	9	< 4.33	ug/Kg		4/20/2016	17:3
Isopropylbenzene	Ethylbenzene		< 4.33	ug/Kg		4/20/2016	17:3
m,p-Xylene       < 4.33	Freon 113		< 4.33	ug/Kg		4/20/2016	17:3
Methyl acetate       < 4.33	Isopropylbenzene		< 4.33	ug/Kg		4/20/2016	17:3
Methyl tert-butyl Ether       < 4.33	m,p-Xylene		< 4.33	ug/Kg		4/20/2016	17:3
Methylcyclohexane       < 4.33	Methyl acetate		< 4.33	ug/Kg		4/20/2016	17:3
Methylene chloride       < 10.8	Methyl tert-butyl Ether		< 4.33	ug/Kg		4/20/2016	17:
Naphthalene       < 10.8	Methylcyclohexane		< 4.33	ug/Kg		4/20/2016	17:
n-Butylbenzene       < 4.33	Methylene chloride		< 10.8	ug/Kg		4/20/2016	17:
n-Propylbenzene       < 4.33	Naphthalene		< 10.8	ug/Kg		4/20/2016	17:3
o-Xylene	n-Butylbenzene		< 4.33	ug/Kg		4/20/2016	17:3
p-Isopropyltoluene       58.3       ug/Kg       4/20/2016       17         sec-Butylbenzene       < 4.33	n-Propylbenzene		< 4.33	ug/Kg		4/20/2016	17:
sec-Butylbenzene       < 4.33	o-Xylene		< 4.33	ug/Kg		4/20/2016	17:3
Styrene       < 10.8	p-Isopropyltoluene		58.3	ug/Kg		4/20/2016	17:3
tert-Butylbenzene < 4.33 ug/Kg 4/20/2016 17 Tetrachloroethene < 4.33 ug/Kg 4/20/2016 17 Toluene < 4.33 ug/Kg 4/20/2016 17 trans-1,2-Dichloroethene < 4.33 ug/Kg 4/20/2016 17	sec-Butylbenzene		< 4.33	ug/Kg		4/20/2016	17:3
Tetrachloroethene       < 4.33	Styrene		< 10.8	ug/Kg		4/20/2016	17:3
Toluene < 4.33 ug/Kg 4/20/2016 17 trans-1,2-Dichloroethene < 4.33 ug/Kg 4/20/2016 17	tert-Butylbenzene		< 4.33	ug/Kg		4/20/2016	17:3
trans-1,2-Dichloroethene < 4.33 ug/Kg 4/20/2016 17	Tetrachloroethene		< 4.33	ug/Kg		4/20/2016	17:
	Toluene		< 4.33	ug/Kg		4/20/2016	17:
trans-1,3-Dichloropropene < 4.33 ug/Kg 4/20/2016 17	trans-1,2-Dichloroethene	2	< 4.33	ug/Kg		4/20/2016	17:
	trans-1,3-Dichloroproper	ne	< 4.33	ug/Kg		4/20/2016	17:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-1.4

Lab Sample ID:161505-04Date Sampled:4/13/2016Matrix:SoilDate Received:4/19/2016

 Trichloroethene
 < 4.33</td>
 ug/Kg
 4/20/2016
 17:37

 Trichlorofluoromethane
 < 4.33</td>
 ug/Kg
 4/20/2016
 17:37

 Vinyl chloride
 < 4.33</td>
 ug/Kg
 4/20/2016
 17:37

Surrogate	<u>Percent Recovery</u>	<u>Limits</u>	<u>Outliers</u>	<u>Date Analy</u>	<u>vzed</u>
1,2-Dichloroethane-d4	113	85.4 - 122		4/20/2016	17:37
4-Bromofluorobenzene	96.0	81.1 - 115		4/20/2016	17:37
Pentafluorobenzene	103	90.7 - 109		4/20/2016	17:37
Toluene-D8	99.5	88.5 - 110		4/20/2016	17:37

**Method Reference(s):** EPA 8260C

EPA 5035

**Data File:** x31769.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.1

 Lab Sample ID:
 161505-05
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1,1-Trichloroethane	< 3.60	ug/Kg		4/20/2016 18:01
1,1,2,2-Tetrachloroethane	< 3.60	ug/Kg		4/20/2016 18:01
1,1,2-Trichloroethane	< 3.60	ug/Kg		4/20/2016 18:01
1,1-Dichloroethane	< 3.60	ug/Kg		4/20/2016 18:01
1,1-Dichloroethene	< 3.60	ug/Kg		4/20/2016 18:01
1,2,3-Trichlorobenzene	< 9.01	ug/Kg		4/20/2016 18:01
1,2,4-Trichlorobenzene	< 9.01	ug/Kg		4/20/2016 18:01
1,2,4-Trimethylbenzene	10.6	ug/Kg		4/20/2016 18:01
1,2-Dibromo-3-Chloropropane	< 18.0	ug/Kg		4/20/2016 18:01
1,2-Dibromoethane	< 3.60	ug/Kg		4/20/2016 18:01
1,2-Dichlorobenzene	< 3.60	ug/Kg		4/20/2016 18:01
1,2-Dichloroethane	< 3.60	ug/Kg		4/20/2016 18:01
1,2-Dichloropropane	< 3.60	ug/Kg		4/20/2016 18:01
1,3,5-Trimethylbenzene	7.58	ug/Kg		4/20/2016 18:01
1,3-Dichlorobenzene	< 3.60	ug/Kg		4/20/2016 18:01
1,4-Dichlorobenzene	< 3.60	ug/Kg		4/20/2016 18:01
1,4-dioxane	< 36.0	ug/Kg		4/20/2016 18:01
2-Butanone	< 18.0	ug/Kg		4/20/2016 18:01
2-Hexanone	< 9.01	ug/Kg		4/20/2016 18:01
4-Methyl-2-pentanone	< 9.01	ug/Kg		4/20/2016 18:01
Acetone	11.9	ug/Kg	J	4/20/2016 18:01
Benzene	3.62	ug/Kg		4/20/2016 18:01
Bromochloromethane	< 9.01	ug/Kg		4/20/2016 18:01
Bromodichloromethane	< 3.60	ug/Kg		4/20/2016 18:01
Bromoform	< 9.01	ug/Kg		4/20/2016 18:01
Bromomethane	< 3.60	ug/Kg		4/20/2016 18:01
Carbon disulfide	4.64	ug/Kg		4/20/2016 18:01



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject keierence:	1440 Empire E	oivu			
Sample Identifier:	8R-2.1				
Lab Sample ID:	161505-05			Date Sampled:	4/14/2016
Matrix:	Soil			Date Received:	4/19/2016
Carbon Tetrachloride		< 3.60	ug/Kg		4/20/2016 18
Chlorobenzene		< 3.60	ug/Kg		4/20/2016 18
Chloroethane		< 3.60	ug/Kg		4/20/2016 18
Chloroform		< 3.60	ug/Kg		4/20/2016 18
Chloromethane		< 3.60	ug/Kg		4/20/2016 18
cis-1,2-Dichloroethene		46.2	ug/Kg		4/20/2016 18
cis-1,3-Dichloropropen	e	< 3.60	ug/Kg		4/20/2016 18
Cyclohexane		< 18.0	ug/Kg		4/20/2016 18
Dibromochloromethane	2	< 3.60	ug/Kg		4/20/2016 18
Dichlorodifluorometha	ne	< 3.60	ug/Kg		4/20/2016 18
Ethylbenzene		5.66	ug/Kg		4/20/2016 18
Freon 113		< 3.60	ug/Kg		4/20/2016 18
Isopropylbenzene		1.88	ug/Kg	J	4/20/2016 18
m,p-Xylene		12.5	ug/Kg		4/20/2016 18
Methyl acetate		< 3.60	ug/Kg		4/20/2016 18
Methyl tert-butyl Ether		< 3.60	ug/Kg		4/20/2016 18
Methylcyclohexane		< 3.60	ug/Kg		4/20/2016 18
Methylene chloride		< 9.01	ug/Kg		4/20/2016 18
Naphthalene		5.79	ug/Kg	J	4/20/2016 18
n-Butylbenzene		< 3.60	ug/Kg		4/20/2016 18
n-Propylbenzene		< 3.60	ug/Kg		4/20/2016 18
o-Xylene		3.49	ug/Kg	J	4/20/2016 18
p-Isopropyltoluene		3.68	ug/Kg		4/20/2016 18
sec-Butylbenzene		4.73	ug/Kg		4/20/2016 18
Styrene		< 9.01	ug/Kg		4/20/2016 18
tert-Butylbenzene		< 3.60	ug/Kg		4/20/2016 18
Tetrachloroethene		< 3.60	ug/Kg		4/20/2016 18
Toluene		8.24	ug/Kg		4/20/2016 18
trans-1,2-Dichloroether	ne	9.77	ug/Kg		4/20/2016 18
trans-1,3-Dichloroprop	ene	< 3.60	ug/Kg		4/20/2016 18



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.1

 Lab Sample ID:
 161505-05
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

Sı	urrogate	Percent l	Recovery	Limits	<u>Outliers</u>	Date Analyz	zed
	Vinyl chloride	3.97	ug/Kg			4/20/2016	18:01
	Trichlorofluoromethane	< 3.60	ug/Kg			4/20/2016	18:01
	Trichloroethene	67.7	ug/Kg			4/20/2016	18:01

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<u>Date Analy</u>	<u>zed</u>
1,2-Dichloroethane-d4	106	85.4 - 122		4/20/2016	18:01
4-Bromofluorobenzene	85.5	81.1 - 115		4/20/2016	18:01
Pentafluorobenzene	101	90.7 - 109		4/20/2016	18:01
Toluene-D8	93.6	88.5 - 110		4/20/2016	18:01

 $Internal\ standard\ outliers\ indicate\ probable\ matrix\ interference$ 

Method Reference(s): EPA 8260C

EPA 5035

Data File: x31770.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.3

 Lab Sample ID:
 161505-06
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

E	<u> Analyte</u>	Result	<u>Units</u>	Qualifier	Date Analyz	zed
	1,1,1-Trichloroethane	< 4.08	ug/Kg		4/20/2016	18:25
	1,1,2,2-Tetrachloroethane	< 4.08	ug/Kg		4/20/2016	18:25
	1,1,2-Trichloroethane	< 4.08	ug/Kg		4/20/2016	18:25
	1,1-Dichloroethane	2.48	ug/Kg	J	4/20/2016	18:25
	1,1-Dichloroethene	< 4.08	ug/Kg		4/20/2016	18:25
	1,2,3-Trichlorobenzene	< 10.2	ug/Kg		4/20/2016	18:25
	1,2,4-Trichlorobenzene	< 10.2	ug/Kg		4/20/2016	18:25
	1,2,4-Trimethylbenzene	18.7	ug/Kg		4/20/2016	18:25
	1,2-Dibromo-3-Chloropropane	< 20.4	ug/Kg		4/20/2016	18:25
	1,2-Dibromoethane	< 4.08	ug/Kg		4/20/2016	18:25
	1,2-Dichlorobenzene	< 4.08	ug/Kg		4/20/2016	18:25
	1,2-Dichloroethane	< 4.08	ug/Kg		4/20/2016	18:25
	1,2-Dichloropropane	< 4.08	ug/Kg		4/20/2016	18:25
	1,3,5-Trimethylbenzene	8.52	ug/Kg		4/20/2016	18:25
	1,3-Dichlorobenzene	< 4.08	ug/Kg		4/20/2016	18:25
	1,4-Dichlorobenzene	< 4.08	ug/Kg		4/20/2016	18:25
	1,4-dioxane	< 40.8	ug/Kg		4/20/2016	18:25
	2-Butanone	< 20.4	ug/Kg		4/20/2016	18:25
	2-Hexanone	< 10.2	ug/Kg		4/20/2016	18:25
	4-Methyl-2-pentanone	< 10.2	ug/Kg		4/20/2016	18:25
	Acetone	14.1	ug/Kg	J	4/20/2016	18:25
	Benzene	4.52	ug/Kg		4/20/2016	18:25
	Bromochloromethane	< 10.2	ug/Kg		4/20/2016	18:25
	Bromodichloromethane	< 4.08	ug/Kg		4/20/2016	18:25
	Bromoform	< 10.2	ug/Kg		4/20/2016	18:25
	Bromomethane	< 4.08	ug/Kg		4/20/2016	18:25
	Carbon disulfide	13.2	ug/Kg		4/20/2016	18:25



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Project Reference:	1440 Empire E	siva			
Sample Identifier:	8R-2.3				
Lab Sample ID:	161505-06			Date Sampled:	4/14/2016
Matrix:	Soil			Date Received:	4/19/2016
Carbon Tetrachloride		< 4.08	ug/Kg		4/20/2016 18:25
Chlorobenzene		< 4.08	ug/Kg		4/20/2016 18:25
Chloroethane		< 4.08	ug/Kg		4/20/2016 18:25
Chloroform		< 4.08	ug/Kg		4/20/2016 18:25
Chloromethane		< 4.08	ug/Kg		4/20/2016 18:25
cis-1,2-Dichloroethene		38.1	ug/Kg		4/20/2016 18:25
cis-1,3-Dichloroproper	ie	< 4.08	ug/Kg		4/20/2016 18:25
Cyclohexane		< 20.4	ug/Kg		4/20/2016 18:25
Dibromochloromethan	e	< 4.08	ug/Kg		4/20/2016 18:25
Dichlorodifluorometha	ne	< 4.08	ug/Kg		4/20/2016 18:25
Ethylbenzene		3.42	ug/Kg	J	4/20/2016 18:25
Freon 113		< 4.08	ug/Kg		4/20/2016 18:25
Isopropylbenzene		< 4.08	ug/Kg		4/20/2016 18:25
m,p-Xylene		5.05	ug/Kg		4/20/2016 18:25
Methyl acetate		< 4.08	ug/Kg		4/20/2016 18:25
Methyl tert-butyl Ether		< 4.08	ug/Kg		4/20/2016 18:25
Methylcyclohexane		< 4.08	ug/Kg		4/20/2016 18:25
Methylene chloride		< 10.2	ug/Kg		4/20/2016 18:25
Naphthalene		49.7	ug/Kg		4/20/2016 18:25
n-Butylbenzene		< 4.08	ug/Kg		4/20/2016 18:25
n-Propylbenzene		< 4.08	ug/Kg		4/20/2016 18:25
o-Xylene		2.46	ug/Kg	J	4/20/2016 18:25
p-Isopropyltoluene		4.46	ug/Kg		4/20/2016 18:25
sec-Butylbenzene		3.73	ug/Kg	J	4/20/2016 18:25
Styrene		< 10.2	ug/Kg		4/20/2016 18:25
tert-Butylbenzene		< 4.08	ug/Kg		4/20/2016 18:25
Tetrachloroethene		3.65	ug/Kg	J	4/20/2016 18:25
Toluene		6.11	ug/Kg		4/20/2016 18:25
trans-1,2-Dichloroethe	ne	8.20	ug/Kg		4/20/2016 18:25
trans-1,3-Dichloroprop	oene	< 4.08	ug/Kg		4/20/2016 18:25



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.3

 Lab Sample ID:
 161505-06
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

 Trichloroethene
 33.0
 ug/Kg
 4/20/2016
 18:25

 Trichlorofluoromethane
 < 4.08</td>
 ug/Kg
 4/20/2016
 18:25

 Vinyl chloride
 10.9
 ug/Kg
 4/20/2016
 18:25

· y				-//	
<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analyzed</b>	
1,2-Dichloroethane-d4	108	85.4 - 122		4/20/2016	18:25
4-Bromofluorobenzene	90.9	81.1 - 115		4/20/2016	18:25
Pentafluorobenzene	102	90.7 - 109		4/20/2016	18:25
Toluene-D8	95.0	88.5 - 110		4/20/2016	18:25

Internal standard outliers indicate probable matrix interference

**Method Reference(s):** EPA 8260C

EPA 5035

**Data File:** x31771.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.4

 Lab Sample ID:
 161505-07
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.27	ug/Kg		4/20/2016 18:49
1,1,2,2-Tetrachloroethane	< 4.27	ug/Kg		4/20/2016 18:49
1,1,2-Trichloroethane	< 4.27	ug/Kg		4/20/2016 18:49
1,1-Dichloroethane	< 4.27	ug/Kg		4/20/2016 18:49
1,1-Dichloroethene	< 4.27	ug/Kg		4/20/2016 18:49
1,2,3-Trichlorobenzene	< 10.7	ug/Kg		4/20/2016 18:49
1,2,4-Trichlorobenzene	< 10.7	ug/Kg		4/20/2016 18:49
1,2,4-Trimethylbenzene	2.38	ug/Kg	J	4/20/2016 18:49
1,2-Dibromo-3-Chloropropane	< 21.4	ug/Kg		4/20/2016 18:49
1,2-Dibromoethane	< 4.27	ug/Kg		4/20/2016 18:49
1,2-Dichlorobenzene	< 4.27	ug/Kg		4/20/2016 18:49
1,2-Dichloroethane	< 4.27	ug/Kg		4/20/2016 18:49
1,2-Dichloropropane	< 4.27	ug/Kg		4/20/2016 18:49
1,3,5-Trimethylbenzene	< 4.27	ug/Kg		4/20/2016 18:49
1,3-Dichlorobenzene	< 4.27	ug/Kg		4/20/2016 18:49
1,4-Dichlorobenzene	< 4.27	ug/Kg		4/20/2016 18:49
1,4-dioxane	< 42.7	ug/Kg		4/20/2016 18:49
2-Butanone	< 21.4	ug/Kg		4/20/2016 18:49
2-Hexanone	< 10.7	ug/Kg		4/20/2016 18:49
4-Methyl-2-pentanone	< 10.7	ug/Kg		4/20/2016 18:49
Acetone	< 21.4	ug/Kg		4/20/2016 18:49
Benzene	2.30	ug/Kg	J	4/20/2016 18:49
Bromochloromethane	< 10.7	ug/Kg		4/20/2016 18:49
Bromodichloromethane	< 4.27	ug/Kg		4/20/2016 18:49
Bromoform	< 10.7	ug/Kg		4/20/2016 18:49
Bromomethane	< 4.27	ug/Kg		4/20/2016 18:49
Carbon disulfide	< 4.27	ug/Kg		4/20/2016 18:49



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject Reference:	1440 Empire B	oivu 			
Sample Identifier:	8R-2.4				
Lab Sample ID:	161505-07			Date Sampled:	4/14/2016
Matrix:	Soil			Date Received:	4/19/2016
Carbon Tetrachloride		< 4.27	ug/Kg		4/20/2016 18:
Chlorobenzene		< 4.27	ug/Kg		4/20/2016 18:
Chloroethane		< 4.27	ug/Kg		4/20/2016 18:
Chloroform		< 4.27	ug/Kg		4/20/2016 18:
Chloromethane		< 4.27	ug/Kg		4/20/2016 18:
cis-1,2-Dichloroethene		7.70	ug/Kg		4/20/2016 18:
cis-1,3-Dichloropropene	2	< 4.27	ug/Kg		4/20/2016 18:
Cyclohexane		< 21.4	ug/Kg		4/20/2016 18:
Dibromochloromethane		< 4.27	ug/Kg		4/20/2016 18:
Dichlorodifluoromethan	ie	< 4.27	ug/Kg		4/20/2016 18:
Ethylbenzene		< 4.27	ug/Kg		4/20/2016 18:
Freon 113		< 4.27	ug/Kg		4/20/2016 18:
Isopropylbenzene		< 4.27	ug/Kg		4/20/2016 18:
m,p-Xylene		< 4.27	ug/Kg		4/20/2016 18:
Methyl acetate		< 4.27	ug/Kg		4/20/2016 18:
Methyl tert-butyl Ether		< 4.27	ug/Kg		4/20/2016 18:
Methylcyclohexane		< 4.27	ug/Kg		4/20/2016 18:
Methylene chloride		< 10.7	ug/Kg		4/20/2016 18:
Naphthalene		< 10.7	ug/Kg		4/20/2016 18:
n-Butylbenzene		< 4.27	ug/Kg		4/20/2016 18:
n-Propylbenzene		< 4.27	ug/Kg		4/20/2016 18:
o-Xylene		< 4.27	ug/Kg		4/20/2016 18:
p-Isopropyltoluene		< 4.27	ug/Kg		4/20/2016 18:
sec-Butylbenzene		< 4.27	ug/Kg		4/20/2016 18:
Styrene		< 10.7	ug/Kg		4/20/2016 18:
tert-Butylbenzene		< 4.27	ug/Kg		4/20/2016 18:
Tetrachloroethene		< 4.27	ug/Kg		4/20/2016 18:
Toluene		< 4.27	ug/Kg		4/20/2016 18:
trans-1,2-Dichloroethen	e	3.85	ug/Kg	J	4/20/2016 18:
trans-1,3-Dichloroprope	ene	< 4.27	ug/Kg		4/20/2016 18:



Ravi Engineering & Land Surveying, P.C. Client:

**Project Reference:** 1440 Empire Blvd

Sample Identifier: 8R-2.4

Lab Sample ID: 161505-07 **Date Sampled:** 4/14/2016 4/19/2016 **Matrix: Date Received:** Soil

Trichloroethene	15.1	ug/Kg			4/20/2016	18:49
Trichlorofluoromethane	< 4.27	ug/Kg			4/20/2016	18:49
Vinyl chloride	< 4.27	ug/Kg			4/20/2016	18:49
<u>Surrogate</u>	Percent Recovery		<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>zed</u>
1,2-Dichloroethane-d4		111	85.4 - 122		4/20/2016	18:49

1,2-Dichloroethane-d4	111	85.4 - 122	4/20/2016	18:49
4-Bromofluorobenzene	84.4	81.1 - 115	4/20/2016	18:49
Pentafluorobenzene	102	90.7 - 109	4/20/2016	18:49
Toluene-D8	93.7	88.5 - 110	4/20/2016	18:49

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C

EPA 5035

Data File: x31772.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.6

 Lab Sample ID:
 161505-08
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

# **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1,1-Trichloroethane	< 4.34	ug/Kg		4/20/2016 19:14
1,1,2,2-Tetrachloroethane	< 4.34	ug/Kg		4/20/2016 19:14
1,1,2-Trichloroethane	< 4.34	ug/Kg		4/20/2016 19:14
1,1-Dichloroethane	5.12	ug/Kg		4/20/2016 19:14
1,1-Dichloroethene	< 4.34	ug/Kg		4/20/2016 19:14
1,2,3-Trichlorobenzene	< 10.9	ug/Kg		4/20/2016 19:14
1,2,4-Trichlorobenzene	< 10.9	ug/Kg		4/20/2016 19:14
1,2,4-Trimethylbenzene	8.06	ug/Kg		4/20/2016 19:14
1,2-Dibromo-3-Chloropropane	< 21.7	ug/Kg		4/20/2016 19:14
1,2-Dibromoethane	< 4.34	ug/Kg		4/20/2016 19:14
1,2-Dichlorobenzene	< 4.34	ug/Kg		4/20/2016 19:14
1,2-Dichloroethane	< 4.34	ug/Kg		4/20/2016 19:14
1,2-Dichloropropane	< 4.34	ug/Kg		4/20/2016 19:14
1,3,5-Trimethylbenzene	3.25	ug/Kg	J	4/20/2016 19:14
1,3-Dichlorobenzene	< 4.34	ug/Kg		4/20/2016 19:14
1,4-Dichlorobenzene	< 4.34	ug/Kg		4/20/2016 19:14
1,4-dioxane	< 43.4	ug/Kg		4/20/2016 19:14
2-Butanone	< 21.7	ug/Kg		4/20/2016 19:14
2-Hexanone	< 10.9	ug/Kg		4/20/2016 19:14
4-Methyl-2-pentanone	< 10.9	ug/Kg		4/20/2016 19:14
Acetone	13.2	ug/Kg	J	4/20/2016 19:14
Benzene	2.86	ug/Kg	J	4/20/2016 19:14
Bromochloromethane	< 10.9	ug/Kg		4/20/2016 19:14
Bromodichloromethane	< 4.34	ug/Kg		4/20/2016 19:14
Bromoform	< 10.9	ug/Kg		4/20/2016 19:14
Bromomethane	< 4.34	ug/Kg		4/20/2016 19:14
Carbon disulfide	6.55	ug/Kg		4/20/2016 19:14



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Toject Kelefence.	1440 Empire b	ivu —				
Sample Identifier: Lab Sample ID:	8R-2.6 161505-08			Date Sampled:	4/14/2016	
Matrix:	Soil			Date Received:	4/19/2016	
Carbon Tetrachloride		< 4.34	ug/Kg		4/20/2016	19:1
Chlorobenzene		< 4.34	ug/Kg		4/20/2016	19:1
Chloroethane		< 4.34	ug/Kg		4/20/2016	19:1
Chloroform		< 4.34	ug/Kg		4/20/2016	19:1
Chloromethane		< 4.34	ug/Kg		4/20/2016	19:1
cis-1,2-Dichloroethene		13.9	ug/Kg		4/20/2016	19:1
cis-1,3-Dichloropropene		< 4.34	ug/Kg		4/20/2016	19:1
Cyclohexane		< 21.7	ug/Kg		4/20/2016	19:1
Dibromochloromethane		< 4.34	ug/Kg		4/20/2016	19:1
Dichlorodifluoromethan	e	< 4.34	ug/Kg		4/20/2016	19:1
Ethylbenzene		< 4.34	ug/Kg		4/20/2016	19:1
Freon 113		< 4.34	ug/Kg		4/20/2016	19:1
Isopropylbenzene		< 4.34	ug/Kg		4/20/2016	19:1
m,p-Xylene		2.31	ug/Kg	J	4/20/2016	19:1
Methyl acetate		< 4.34	ug/Kg		4/20/2016	19:1
Methyl tert-butyl Ether		< 4.34	ug/Kg		4/20/2016	19:1
Methylcyclohexane		< 4.34	ug/Kg		4/20/2016	19:1
Methylene chloride		< 10.9	ug/Kg		4/20/2016	19:1
Naphthalene		7.76	ug/Kg	J	4/20/2016	19:1
n-Butylbenzene		< 4.34	ug/Kg		4/20/2016	19:1
n-Propylbenzene		< 4.34	ug/Kg		4/20/2016	19:1
o-Xylene		< 4.34	ug/Kg		4/20/2016	19:1
p-Isopropyltoluene		< 4.34	ug/Kg		4/20/2016	19:1
sec-Butylbenzene		< 4.34	ug/Kg		4/20/2016	19:1
Styrene		< 10.9	ug/Kg		4/20/2016	19:1
tert-Butylbenzene		< 4.34	ug/Kg		4/20/2016	19:1
Tetrachloroethene		3.09	ug/Kg	J	4/20/2016	19:1
Toluene		4.12	ug/Kg	J	4/20/2016	19:1
trans-1,2-Dichloroethene	e	6.50	ug/Kg		4/20/2016	19:1
trans-1,3-Dichloroprope	ne	< 4.34	ug/Kg		4/20/2016	19:1



4/20/2016

19:14

Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.6

Toluene-D8

 Lab Sample ID:
 161505-08
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

Trichloroethene	23.1	ug/Kg			4/20/2016	19:14
Trichlorofluoromethane	< 4.34	ug/Kg			4/20/2016	19:14
Vinyl chloride	4.53	ug/Kg			4/20/2016	19:14
<u>Surrogate</u>	<u>Percei</u>	Percent Recovery		<u>Outliers</u>	<b>Date Analy</b>	<u>zed</u>
1,2-Dichloroethane-d4		110	85.4 - 122		4/20/2016	19:14
4-Bromofluorobenzene		93.4	81.1 - 115		4/20/2016	19:14
Pentafluorobenzene		102	90.7 - 109		4/20/2016	19:14

95.4

Internal standard outliers indicate probable matrix interference

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x31773.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

88.5 - 110



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.8

 Lab Sample ID:
 161505-09
 Date Sampled:
 4/15/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### **Volatile Organics**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.14	ug/Kg		4/20/2016 19:38
1,1,2,2-Tetrachloroethane	< 4.14	ug/Kg		4/20/2016 19:38
1,1,2-Trichloroethane	< 4.14	ug/Kg		4/20/2016 19:38
1,1-Dichloroethane	< 4.14	ug/Kg		4/20/2016 19:38
1,1-Dichloroethene	< 4.14	ug/Kg		4/20/2016 19:38
1,2,3-Trichlorobenzene	< 10.3	ug/Kg		4/20/2016 19:38
1,2,4-Trichlorobenzene	< 10.3	ug/Kg		4/20/2016 19:38
1,2,4-Trimethylbenzene	3.29	ug/Kg	J	4/20/2016 19:38
1,2-Dibromo-3-Chloropropane	< 20.7	ug/Kg		4/20/2016 19:38
1,2-Dibromoethane	< 4.14	ug/Kg		4/20/2016 19:38
1,2-Dichlorobenzene	< 4.14	ug/Kg		4/20/2016 19:38
1,2-Dichloroethane	< 4.14	ug/Kg		4/20/2016 19:38
1,2-Dichloropropane	< 4.14	ug/Kg		4/20/2016 19:38
1,3,5-Trimethylbenzene	2.18	ug/Kg	J	4/20/2016 19:38
1,3-Dichlorobenzene	< 4.14	ug/Kg		4/20/2016 19:38
1,4-Dichlorobenzene	< 4.14	ug/Kg		4/20/2016 19:38
1,4-dioxane	< 41.4	ug/Kg		4/20/2016 19:38
2-Butanone	< 20.7	ug/Kg		4/20/2016 19:38
2-Hexanone	< 10.3	ug/Kg		4/20/2016 19:38
4-Methyl-2-pentanone	< 10.3	ug/Kg		4/20/2016 19:38
Acetone	< 20.7	ug/Kg		4/20/2016 19:38
Benzene	< 4.14	ug/Kg		4/20/2016 19:38
Bromochloromethane	< 10.3	ug/Kg		4/20/2016 19:38
Bromodichloromethane	< 4.14	ug/Kg		4/20/2016 19:38
Bromoform	< 10.3	ug/Kg		4/20/2016 19:38
Bromomethane	< 4.14	ug/Kg		4/20/2016 19:38
Carbon disulfide	< 4.14	ug/Kg		4/20/2016 19:38



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	8R-2.8				
Lab Sample ID:	161505-09			Date Sampled:	4/15/2016
Matrix:	Soil			Date Received:	4/19/2016
Carbon Tetrachloride		< 4.14	ug/Kg		4/20/2016 19
Chlorobenzene		< 4.14	ug/Kg		4/20/2016 19:
Chloroethane		< 4.14	ug/Kg		4/20/2016 19:
Chloroform		< 4.14	ug/Kg		4/20/2016 19:
Chloromethane		< 4.14	ug/Kg		4/20/2016 19:
cis-1,2-Dichloroethene		13.5	ug/Kg		4/20/2016 19:
cis-1,3-Dichloropropen	ie	< 4.14	ug/Kg		4/20/2016 19:
Cyclohexane		< 20.7	ug/Kg		4/20/2016 19:
Dibromochloromethan	e	< 4.14	ug/Kg		4/20/2016 19:
Dichlorodifluorometha	ne	< 4.14	ug/Kg		4/20/2016 19:
Ethylbenzene		< 4.14	ug/Kg		4/20/2016 19:
Freon 113		< 4.14	ug/Kg		4/20/2016 19:
Isopropylbenzene		< 4.14	ug/Kg		4/20/2016 19:
m,p-Xylene		< 4.14	ug/Kg		4/20/2016 19:
Methyl acetate		< 4.14	ug/Kg		4/20/2016 19:
Methyl tert-butyl Ether	•	< 4.14	ug/Kg		4/20/2016 19:
Methylcyclohexane		< 4.14	ug/Kg		4/20/2016 19:
Methylene chloride		< 10.3	ug/Kg		4/20/2016 19:
Naphthalene		< 10.3	ug/Kg		4/20/2016 19:
n-Butylbenzene		< 4.14	ug/Kg		4/20/2016 19:
n-Propylbenzene		< 4.14	ug/Kg		4/20/2016 19:
o-Xylene		< 4.14	ug/Kg		4/20/2016 19:
p-Isopropyltoluene		< 4.14	ug/Kg		4/20/2016 19:
sec-Butylbenzene		< 4.14	ug/Kg		4/20/2016 19:
Styrene		< 10.3	ug/Kg		4/20/2016 19:
tert-Butylbenzene		< 4.14	ug/Kg		4/20/2016 19:
Tetrachloroethene		< 4.14	ug/Kg		4/20/2016 19:
Toluene		2.30	ug/Kg	J	4/20/2016 19:
trans-1,2-Dichloroethe	ne	< 4.14	ug/Kg		4/20/2016 19:
trans-1,3-Dichloroprop	oene	< 4.14	ug/Kg		4/20/2016 19:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** 8R-2.8

 Lab Sample ID:
 161505-09
 Date Sampled:
 4/15/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

 Trichloroethene
 5.28
 ug/Kg
 4/20/2016
 19:38

 Trichlorofluoromethane
 < 4.14</td>
 ug/Kg
 4/20/2016
 19:38

 Vinyl chloride
 < 4.14</td>
 ug/Kg
 4/20/2016
 19:38

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>vzed</u>
1,2-Dichloroethane-d4	110	85.4 - 122		4/20/2016	19:38
4-Bromofluorobenzene	92.2	81.1 - 115		4/20/2016	19:38
Pentafluorobenzene	102	90.7 - 109		4/20/2016	19:38
Toluene-D8	94.9	88.5 - 110		4/20/2016	19:38

**Method Reference(s):** EPA 8260C

EPA 5035

**Data File:** x31774.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.1

**Lab Sample ID:** 161505-10 **Date Sampled:** 4/14/2016

Matrix: Soil Date Received: 4/19/2016

### **Metals**

Analyte	<b>Result</b>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	4.80	mg/Kg		4/21/2016 20:39
Barium	43.7	mg/Kg		4/21/2016 20:39
Beryllium	0.278	mg/Kg		4/21/2016 20:39
Cadmium	0.919	mg/Kg		4/21/2016 20:39
Chromium	49.3	mg/Kg		4/21/2016 20:39
Copper	33.9	mg/Kg		4/21/2016 20:39
Lead	77.4	mg/Kg		4/21/2016 20:39
Manganese	263	mg/Kg		4/21/2016 20:39
Nickel	32.0	mg/Kg		4/21/2016 20:39
Selenium	0.635	mg/Kg		4/25/2016 13:43
Silver	< 0.547	mg/Kg		4/21/2016 20:39
Zinc	76.8	mg/Kg		4/21/2016 20:39

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 4/20/2016 Data File: 042116b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.1

 Lab Sample ID:
 161505-10
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

Matrix. 501

<u>Mercury</u>

AnalyteResultUnitsQualifierDate AnalyzedMercury0.221mg/Kg4/22/2016 15:46

Method Reference(s):EPA 7471BPreparation Date:4/22/2016Data File:Hg160422A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.1

 Lab Sample ID:
 161505-10
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### **PCBs**

Analyte	<u>Result</u>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
PCB-1016	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1221	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1232	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1242	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1248	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1254	4.01	mg/Kg			4/27/2016	10:35
PCB-1260	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1262	< 0.641	mg/Kg			4/27/2016	10:35
PCB-1268	< 0.641	mg/Kg			4/27/2016	10:35
<u>Surrogate</u>	Percent	Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>zed</u>
Decachlorobiphenyl	Ī	NC	0.53 - 137		4/27/2016	10:35
Tetrachloro-m-xylene	Ī	NC	0 - 138		4/27/2016	10:35

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 4/21/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.1

 Lab Sample ID:
 161505-10
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### **Chlorinated Pesticides**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analyzed</b>	l
4,4-DDD	< 32.0	ug/Kg			4/25/2016 11	1:16
4,4-DDE	124	ug/Kg		P	4/25/2016 11	1:16
4,4-DDT	286	ug/Kg			4/25/2016 11	1:16
Aldrin	< 32.0	ug/Kg			4/25/2016 11	1:16
alpha-BHC	< 32.0	ug/Kg			4/25/2016 11	1:16
beta-BHC	< 32.0	ug/Kg			4/25/2016 11	1:16
cis-Chlordane	29.1	ug/Kg		JP	4/25/2016 11	1:16
delta-BHC	< 32.0	ug/Kg			4/25/2016 11	1:16
Dieldrin	< 32.0	ug/Kg			4/25/2016 11	1:16
Endosulfan I	< 32.0	ug/Kg			4/25/2016 11	1:16
Endosulfan II	127	ug/Kg		P	4/25/2016 11	1:16
Endosulfan Sulfate	125	ug/Kg		P	4/25/2016 11	1:16
Endrin	89.3	ug/Kg		P	4/25/2016 11	1:16
Endrin Aldehyde	26.4	ug/Kg		JP	4/25/2016 11	1:16
Endrin Ketone	28.9	ug/Kg		JP	4/25/2016 11	1:16
gamma-BHC (Lindane)	< 32.0	ug/Kg			4/25/2016 11	1:16
Heptachlor	< 32.0	ug/Kg			4/25/2016 11	1:16
Heptachlor Epoxide	24.9	ug/Kg		JP	4/25/2016 11	1:16
Methoxychlor	91.9	ug/Kg			4/25/2016 11	1:16
Toxaphene	< 320	ug/Kg			4/25/2016 11	1:16
trans-Chlordane	99.8	ug/Kg		P	4/25/2016 11	1:16
<u>Surrogate</u>	Percei	nt Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analyzed</b>	l
Decachlorobiphenyl (1)		NC	9.5 - 93.3		4/25/2016 11	1:16
Tetrachloro-m-xylene (1)		NC	13.2 - 96.3		4/25/2016 11	1:16

Method Reference(s): EPA 8081B

EPA 3550C **Preparation Date:** 4/21/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.1

 Lab Sample ID:
 161505-10
 Date Sampled:
 4/14/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1-Biphenyl	< 3220	ug/Kg		4/26/2016 08:29
1,2,4,5-Tetrachlorobenzene	< 3220	ug/Kg		4/26/2016 08:29
1,2,4-Trichlorobenzene	< 3220	ug/Kg		4/26/2016 08:29
1,2-Dichlorobenzene	< 3220	ug/Kg		4/26/2016 08:29
1,3-Dichlorobenzene	< 3220	ug/Kg		4/26/2016 08:29
1,4-Dichlorobenzene	< 3220	ug/Kg		4/26/2016 08:29
2,3,4,6-Tetrachlorophenol	< 3220	ug/Kg		4/26/2016 08:29
2,4,5-Trichlorophenol	< 6450	ug/Kg		4/26/2016 08:29
2,4,6-Trichlorophenol	< 3220	ug/Kg		4/26/2016 08:29
2,4-Dichlorophenol	< 3220	ug/Kg		4/26/2016 08:29
2,4-Dimethylphenol	< 3220	ug/Kg		4/26/2016 08:29
2,4-Dinitrophenol	< 6450	ug/Kg		4/26/2016 08:29
2,4-Dinitrotoluene	< 3220	ug/Kg		4/26/2016 08:29
2,6-Dinitrotoluene	< 3220	ug/Kg		4/26/2016 08:29
2-Chloronaphthalene	< 3220	ug/Kg		4/26/2016 08:29
2-Chlorophenol	< 3220	ug/Kg		4/26/2016 08:29
2-Methylnapthalene	< 3220	ug/Kg		4/26/2016 08:29
2-Methylphenol	< 3220	ug/Kg		4/26/2016 08:29
2-Nitroaniline	< 6450	ug/Kg		4/26/2016 08:29
2-Nitrophenol	< 3220	ug/Kg		4/26/2016 08:29
3&4-Methylphenol	< 3220	ug/Kg		4/26/2016 08:29
3,3'-Dichlorobenzidine	< 3220	ug/Kg		4/26/2016 08:29
3-Nitroaniline	< 6450	ug/Kg		4/26/2016 08:29
4,6-Dinitro-2-methylphenol	< 6450	ug/Kg		4/26/2016 08:29
4-Bromophenyl phenyl ether	< 3220	ug/Kg		4/26/2016 08:29
4-Chloro-3-methylphenol	< 3220	ug/Kg		4/26/2016 08:29
4-Chloroaniline	< 3220	ug/Kg		4/26/2016 08:29



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject keierence:	1440 Empire E	Jivu				
Sample Identifier:	C-8.1					
Lab Sample ID:	161505-10			Date Sampled:	4/14/2016	
Matrix:	Soil			Date Received:	4/19/2016	
4-Chlorophenyl pheny	l ether	< 3220	ug/Kg		4/26/2016	08:2
4-Nitroaniline		< 6450	ug/Kg		4/26/2016	08:2
4-Nitrophenol		< 6450	ug/Kg		4/26/2016	08:2
Acenaphthene		< 3220	ug/Kg		4/26/2016	08:2
Acenaphthylene		< 3220	ug/Kg		4/26/2016	08:2
Acetophenone		< 3220	ug/Kg		4/26/2016	08:2
Anthracene		< 3220	ug/Kg		4/26/2016	08:2
Atrazine		< 3220	ug/Kg		4/26/2016	08:
Benzaldehyde		< 3220	ug/Kg		4/26/2016	08:
Benzo (a) anthracene		20300	ug/Kg		4/26/2016	08:
Benzo (a) pyrene		28800	ug/Kg		4/26/2016	08:
Benzo (b) fluoranthen	e	43900	ug/Kg		4/26/2016	08:
Benzo (g,h,i) perylene		26100	ug/Kg		4/26/2016	08:
Benzo (k) fluoranthen	e	17400	ug/Kg		4/26/2016	08:
Bis (2-chloroethoxy)	nethane	< 3220	ug/Kg		4/26/2016	08:
Bis (2-chloroethyl) et	her	< 3220	ug/Kg		4/26/2016	08:
Bis (2-chloroisopropy	l) ether	< 3220	ug/Kg		4/26/2016	08:
Bis (2-ethylhexyl) pht	halate	< 3220	ug/Kg		4/26/2016	08:
Butylbenzylphthalate		< 3220	ug/Kg		4/26/2016	08:
Caprolactam		< 3220	ug/Kg		4/26/2016	08:
Carbazole		< 3220	ug/Kg		4/26/2016	08:
Chrysene		26700	ug/Kg		4/26/2016	08:
Dibenz (a,h) anthrace	ne	7520	ug/Kg		4/26/2016	08:
Dibenzofuran		< 3220	ug/Kg		4/26/2016	08:
Diethyl phthalate		< 3220	ug/Kg		4/26/2016	08:
Dimethyl phthalate		< 6450	ug/Kg		4/26/2016	08:
Di-n-butyl phthalate		< 3220	ug/Kg		4/26/2016	08:
Di-n-octylphthalate		< 3220	ug/Kg		4/26/2016	08:
Fluoranthene		20100	ug/Kg		4/26/2016	08:
Fluorene		< 3220	ug/Kg		4/26/2016	08:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	C-8.1		
Lab Sample ID:	161505-10	Date Sampled:	4/14/2016
Matrix:	Soil	Date Received:	4/19/2016

<b>latrix:</b> Soil			Date Received:	4/19/2016	
Hexachlorobenzene	< 3220	ug/Kg		4/26/2016	08:29
Hexachlorobutadiene	< 3220	ug/Kg		4/26/2016	08:29
Hexachlorocyclopentadiene	< 3220	ug/Kg		4/26/2016	08:29
Hexachloroethane	< 3220	ug/Kg		4/26/2016	08:29
Indeno (1,2,3-cd) pyrene	31300	ug/Kg		4/26/2016	08:29
Isophorone	< 3220	ug/Kg		4/26/2016	08:29
Naphthalene	< 3220	ug/Kg		4/26/2016	08:29
Nitrobenzene	< 3220	ug/Kg		4/26/2016	08:29
N-Nitroso-di-n-propylamine	< 3220	ug/Kg		4/26/2016	08:29
N-Nitrosodiphenylamine	< 3220	ug/Kg		4/26/2016	08:29
Pentachlorophenol	< 6450	ug/Kg		4/26/2016	08:29
Phenanthrene	4420	ug/Kg		4/26/2016	08:29
Phenol	< 3220	ug/Kg		4/26/2016	08:29
Pyrene	19900	ug/Kg		4/26/2016	08:29

Surrogate Percent Recovery Limits Outliers Date Analyz	ed
Surrogate Tercent Recovery Linits Outners Date Analyz	
2,4,6-Tribromophenol NC 26.8 - 101 4/26/2016	08:29
2-Fluorobiphenyl NC 34.4 - 98.8 4/26/2016	08:29
2-Fluorophenol NC 31.4 - 89.7 4/26/2016	08:29
Nitrobenzene-d5 NC 37.1 - 83.6 4/26/2016	08:29
Phenol-d5 NC 36.3 - 94.5 4/26/2016	08:29
Terphenyl-d14 NC 51.8 - 112 4/26/2016	08:29

**Method Reference(s):** EPA 8270D

EPA 3550C **Preparation Date:** 4/22/2016

Preparation Date: 4/22/2016 Data File: B11283.D



Ravi Engineering & Land Surveying, P.C. Client:

**Project Reference:** 1440 Empire Blvd

Sample Identifier: C-8.1

Lab Sample ID: 161505-10 Date Sampled: 4/14/2016 **Date Received:** 4/19/2016

**Matrix:** Soil

**Total Cyanide** 

**Analyte Units Qualifier Result Date Analyzed** Cyanide, Total 0.443 mg/Kg I 4/25/2016

Method Reference(s): EPA 9014 4/21/2016 **Preparation Date:** 



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.2

**Lab Sample ID:** 161505-11 **Date Sampled:** 4/13/2016

Matrix: Soil Date Received: 4/19/2016

### **Metals**

Analyte	<b>Result</b>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	18.5	mg/Kg		4/21/2016 20:43
Barium	185	mg/Kg		4/21/2016 20:43
Beryllium	0.656	mg/Kg		4/21/2016 20:43
Cadmium	0.408	mg/Kg		4/21/2016 20:43
Chromium	18.3	mg/Kg		4/21/2016 20:43
Copper	30.8	mg/Kg		4/21/2016 20:43
Lead	118	mg/Kg		4/21/2016 20:43
Manganese	264	mg/Kg		4/21/2016 20:43
Nickel	14.3	mg/Kg		4/21/2016 20:43
Selenium	0.610	mg/Kg	J	4/25/2016 13:47
Silver	< 0.617	mg/Kg		4/21/2016 20:43
Zinc	77.1	mg/Kg		4/21/2016 20:43

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 4/20/2016 Data File: 042116b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.2

 Lab Sample ID:
 161505-11
 Date Sampled:
 4/13/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

<u>Mercury</u>

AnalyteResultUnitsQualifierDate AnalyzedMercury0.0776mg/Kg4/22/2016 15:49

Method Reference(s):EPA 7471BPreparation Date:4/22/2016Data File:Hg160422A



Ravi Engineering & Land Surveying, P.C. Client:

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.2

Lab Sample ID: **Date Sampled:** 161505-11 4/13/2016 **Matrix: Date Received:** 4/19/2016 Soil

### **PCBs**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
PCB-1016	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1221	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1232	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1242	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1248	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1254	0.232	mg/Kg			4/26/2016	10:31
PCB-1260	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1262	< 0.0352	mg/Kg			4/26/2016	10:31
PCB-1268	< 0.0352	mg/Kg			4/26/2016	10:31
<u>Surrogate</u>	<u>Percent</u>	Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>zed</u>
Decachlorobiphenyl	4:	5.9	0.53 - 137		4/26/2016	10:31
Tetrachloro-m-xylene	4:	1.1	0 - 138		4/26/2016	10:31

Method Reference(s): EPA 8082A

EPA 3550C

**Preparation Date:** 4/21/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.2

 Lab Sample ID:
 161505-11
 Date Sampled:
 4/13/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### **Chlorinated Pesticides**

Analyte	<u>Result</u>	<u>Units</u>		<b>Qualifier</b>	Date Analy	<u>zed</u>
4,4-DDD	11.4	ug/Kg		P	4/21/2016	16:40
4,4-DDE	19.8	ug/Kg			4/21/2016	16:40
4,4-DDT	34.6	ug/Kg			4/21/2016	16:40
Aldrin	< 3.52	ug/Kg			4/21/2016	16:40
alpha-BHC	< 3.52	ug/Kg			4/21/2016	16:40
beta-BHC	< 3.52	ug/Kg			4/21/2016	16:40
cis-Chlordane	4.60	ug/Kg		P	4/21/2016	16:40
delta-BHC	< 3.52	ug/Kg			4/21/2016	16:40
Dieldrin	15.6	ug/Kg		P	4/21/2016	16:40
Endosulfan I	< 3.52	ug/Kg			4/21/2016	16:40
Endosulfan II	20.6	ug/Kg			4/21/2016	16:40
Endosulfan Sulfate	22.6	ug/Kg		P	4/21/2016	16:40
Endrin	21.4	ug/Kg			4/21/2016	16:40
Endrin Aldehyde	< 3.52	ug/Kg			4/21/2016	16:40
Endrin Ketone	6.82	ug/Kg		P	4/21/2016	16:40
gamma-BHC (Lindane)	< 3.52	ug/Kg			4/21/2016	16:40
Heptachlor	< 3.52	ug/Kg			4/21/2016	16:40
Heptachlor Epoxide	2.16	ug/Kg		JP	4/21/2016	16:40
Methoxychlor	8.33	ug/Kg		P	4/21/2016	16:40
Toxaphene	< 35.2	ug/Kg			4/21/2016	16:40
trans-Chlordane	10.3	ug/Kg		P	4/21/2016	16:40
Surrogate	Percent	Recovery	<b>Limits</b>	<u>Outliers</u>	<b>Date Analy</b>	zed
Decachlorobiphenyl (1)	9	8.4	9.5 - 93.3	*	4/21/2016	16:40
Tetrachloro-m-xylene (1)	3	7.2	13.2 - 96.3		4/21/2016	16:40

**Method Reference(s):** EPA 8081B

EPA 3550C

**Preparation Date:** 4/21/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.2

 Lab Sample ID:
 161505-11
 Date Sampled:
 4/13/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	Date Analyzed
1,1-Biphenyl	< 354	ug/Kg		4/25/2016 17:48
1,2,4,5-Tetrachlorobenzene	< 354	ug/Kg		4/25/2016 17:48
1,2,4-Trichlorobenzene	< 354	ug/Kg		4/25/2016 17:48
1,2-Dichlorobenzene	< 354	ug/Kg		4/25/2016 17:48
1,3-Dichlorobenzene	< 354	ug/Kg		4/25/2016 17:48
1,4-Dichlorobenzene	< 354	ug/Kg		4/25/2016 17:48
2,3,4,6-Tetrachlorophenol	< 354	ug/Kg		4/25/2016 17:48
2,4,5-Trichlorophenol	< 708	ug/Kg		4/25/2016 17:48
2,4,6-Trichlorophenol	< 354	ug/Kg		4/25/2016 17:48
2,4-Dichlorophenol	< 354	ug/Kg		4/25/2016 17:48
2,4-Dimethylphenol	< 354	ug/Kg		4/25/2016 17:48
2,4-Dinitrophenol	< 708	ug/Kg		4/25/2016 17:48
2,4-Dinitrotoluene	< 354	ug/Kg		4/25/2016 17:48
2,6-Dinitrotoluene	< 354	ug/Kg		4/25/2016 17:48
2-Chloronaphthalene	< 354	ug/Kg		4/25/2016 17:48
2-Chlorophenol	< 354	ug/Kg		4/25/2016 17:48
2-Methylnapthalene	< 354	ug/Kg		4/25/2016 17:48
2-Methylphenol	< 354	ug/Kg		4/25/2016 17:48
2-Nitroaniline	< 708	ug/Kg		4/25/2016 17:48
2-Nitrophenol	< 354	ug/Kg		4/25/2016 17:48
3&4-Methylphenol	< 354	ug/Kg		4/25/2016 17:48
3,3'-Dichlorobenzidine	< 354	ug/Kg		4/25/2016 17:48
3-Nitroaniline	< 708	ug/Kg		4/25/2016 17:48
4,6-Dinitro-2-methylphenol	< 708	ug/Kg		4/25/2016 17:48
4-Bromophenyl phenyl ether	< 354	ug/Kg		4/25/2016 17:48
4-Chloro-3-methylphenol	< 354	ug/Kg		4/25/2016 17:48
4-Chloroaniline	< 354	ug/Kg		4/25/2016 17:48



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject keierence:	1440 Empire i	oivu			
Sample Identifier:	C-8.2				
Lab Sample ID:	161505-11			Date Sampled:	4/13/2016
Matrix:	Soil			Date Received:	4/19/2016
4-Chlorophenyl pheny	l ether	< 354	ug/Kg		4/25/2016 17:4
4-Nitroaniline		< 708	ug/Kg		4/25/2016 17:4
4-Nitrophenol		< 708	ug/Kg		4/25/2016 17:4
Acenaphthene		< 354	ug/Kg		4/25/2016 17:4
Acenaphthylene		< 354	ug/Kg		4/25/2016 17:4
Acetophenone		< 354	ug/Kg		4/25/2016 17:4
Anthracene		< 354	ug/Kg		4/25/2016 17:4
Atrazine		< 354	ug/Kg		4/25/2016 17:4
Benzaldehyde		< 354	ug/Kg		4/25/2016 17:4
Benzo (a) anthracene		1450	ug/Kg		4/25/2016 17:4
Benzo (a) pyrene		2310	ug/Kg		4/25/2016 17:4
Benzo (b) fluoranthen	e	3050	ug/Kg		4/25/2016 17:4
Benzo (g,h,i) perylene		2360	ug/Kg		4/25/2016 17:4
Benzo (k) fluoranthen	e	1740	ug/Kg		4/25/2016 17:4
Bis (2-chloroethoxy)	nethane	< 354	ug/Kg		4/25/2016 17:4
Bis (2-chloroethyl) et	her	< 354	ug/Kg		4/25/2016 17:4
Bis (2-chloroisopropy	l) ether	< 354	ug/Kg		4/25/2016 17:4
Bis (2-ethylhexyl) pht	halate	< 354	ug/Kg		4/25/2016 17:4
Butylbenzylphthalate		< 354	ug/Kg		4/25/2016 17:4
Caprolactam		< 354	ug/Kg		4/25/2016 17:4
Carbazole		< 354	ug/Kg		4/25/2016 17:4
Chrysene		1870	ug/Kg		4/25/2016 17:4
Dibenz (a,h) anthrace	ne	689	ug/Kg		4/25/2016 17:4
Dibenzofuran		< 354	ug/Kg		4/25/2016 17:4
Diethyl phthalate		< 354	ug/Kg		4/25/2016 17:4
Dimethyl phthalate		< 708	ug/Kg		4/25/2016 17:4
Di-n-butyl phthalate		< 354	ug/Kg		4/25/2016 17:4
Di-n-octylphthalate		< 354	ug/Kg		4/25/2016 17:4
Fluoranthene		1400	ug/Kg		4/25/2016 17:4
Fluorene		< 354	ug/Kg		4/25/2016 17:4



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	C-8.2				
Lab Sample ID:	161505-11			Date Sampled:	4/13/2016
Matrix:	Soil			Date Received:	4/19/2016
		. 254	/17		4 /25 /2017

latrix:	Soil			Date	Received:	4/19/2016	
Hexachlorobenz	zene	< 354	ug/Kg			4/25/2016	17:48
Hexachlorobuta	diene	< 354	ug/Kg			4/25/2016	17:48
Hexachlorocyclo	opentadiene	< 354	ug/Kg			4/25/2016	17:48
Hexachloroetha	ne	< 354	ug/Kg			4/25/2016	17:48
Indeno (1,2,3-co	d) pyrene	2920	ug/Kg			4/25/2016	17:48
Isophorone		< 354	ug/Kg			4/25/2016	17:48
Naphthalene		< 354	ug/Kg			4/25/2016	17:48
Nitrobenzene		< 354	ug/Kg			4/25/2016	17:48
N-Nitroso-di-n-	propylamine	< 354	ug/Kg			4/25/2016	17:48
N-Nitrosodiphe:	nylamine	< 354	ug/Kg			4/25/2016	17:48
Pentachlorophe	nol	< 708	ug/Kg			4/25/2016	17:48
Phenanthrene		306	ug/Kg		J	4/25/2016	17:48
Phenol		< 354	ug/Kg			4/25/2016	17:48
Pyrene		1410	ug/Kg			4/25/2016	17:48
_		_					

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analy	zed
2,4,6-Tribromophenol	58.3	26.8 - 101		4/25/2016	17:48
2-Fluorobiphenyl	49.2	34.4 - 98.8		4/25/2016	17:48
2-Fluorophenol	47.9	31.4 - 89.7		4/25/2016	17:48
Nitrobenzene-d5	45.0	37.1 - 83.6		4/25/2016	17:48
Phenol-d5	49.8	36.3 - 94.5		4/25/2016	17:48
Terphenyl-d14	58.2	51.8 - 112		4/25/2016	17:48

**Method Reference(s):** EPA 8270D

EPA 3550C

 Preparation Date:
 4/22/2016

 Data File:
 B11257.D



Ravi Engineering & Land Surveying, P.C. Client:

**Project Reference:** 1440 Empire Blvd

Sample Identifier: C-8.2

Lab Sample ID: 161505-11 **Date Sampled:** 4/13/2016 **Date Received: Matrix:** Soil 4/19/2016

**Total Cyanide** 

**Analyte Units Qualifier Result Date Analyzed** 

Cyanide, Total 0.562 mg/Kg 4/25/2016

Method Reference(s): EPA 9014 4/21/2016 **Preparation Date:** 



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.3

**Lab Sample ID:** 161505-12 **Date Sampled:** 4/15/2016

Matrix: Soil Date Received: 4/19/2016

### **Metals**

Analyte	Result	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
Arsenic	4.91	mg/Kg		4/21/2016 20:48
Barium	45.5	mg/Kg		4/21/2016 20:48
Beryllium	0.271	mg/Kg		4/21/2016 20:48
Cadmium	0.789	mg/Kg		4/21/2016 20:48
Chromium	43.8	mg/Kg	D	4/21/2016 20:48
Copper	39.0	mg/Kg		4/21/2016 20:48
Lead	87.5	mg/Kg		4/21/2016 20:48
Manganese	320	mg/Kg	M	4/21/2016 20:48
Nickel	30.7	mg/Kg		4/21/2016 20:48
Selenium	0.857	mg/Kg	D	4/25/2016 13:51
Silver	< 0.539	mg/Kg		4/21/2016 20:48
Zinc	88.7	mg/Kg	D	4/21/2016 20:48

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 4/20/2016 Data File: 042116b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.3

**Lab Sample ID:** 161505-12 **Date Sampled:** 4/15/2016

Matrix: Soil Date Received: 4/19/2016

<u>Mercury</u>

Analyte Result Units Qualifier Date Analyzed

Mercury 0.0740 mg/Kg 4/22/2016 15:52

Method Reference(s):EPA 7471BPreparation Date:4/22/2016Data File:Hg160422A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.3

 Lab Sample ID:
 161505-12
 Date Sampled:
 4/15/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### **PCBs**

Analyte	<b>Result</b>	<u>Units</u>		<b>Qualifier</b>	Date Analyz	<u>zed</u>
PCB-1016	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1221	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1232	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1242	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1248	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1254	0.888	mg/Kg			4/27/2016	11:21
PCB-1260	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1262	< 0.158	mg/Kg			4/27/2016	11:21
PCB-1268	< 0.158	mg/Kg			4/27/2016	11:21
<u>Surrogate</u>	Percent l	Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analyz	<u>zed</u>
Decachlorobiphenyl	63	.2	0.53 - 137		4/27/2016	11:21
Tetrachloro-m-xylene	52	.1	0 - 138		4/27/2016	11:21

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 4/21/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.3

 Lab Sample ID:
 161505-12
 Date Sampled:
 4/15/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### **Chlorinated Pesticides**

Analyte	Result	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
4,4-DDD	17.4	ug/Kg		P	4/25/2016	11:30
4,4-DDE	43.8	ug/Kg		P	4/25/2016	11:30
4,4-DDT	9.13	ug/Kg		P	4/25/2016	11:30
Aldrin	< 6.33	ug/Kg			4/25/2016	11:30
alpha-BHC	< 6.33	ug/Kg			4/25/2016	11:30
beta-BHC	8.37	ug/Kg		P	4/25/2016	11:30
cis-Chlordane	61.6	ug/Kg		P	4/25/2016	11:30
delta-BHC	4.00	ug/Kg		JP	4/25/2016	11:30
Dieldrin	46.7	ug/Kg		P	4/25/2016	11:30
Endosulfan I	< 6.33	ug/Kg			4/25/2016	11:30
Endosulfan II	31.3	ug/Kg		P	4/25/2016	11:30
Endosulfan Sulfate	12.8	ug/Kg		P	4/25/2016	11:30
Endrin	43.0	ug/Kg			4/25/2016	11:30
Endrin Aldehyde	6.08	ug/Kg		JP	4/25/2016	11:30
Endrin Ketone	9.43	ug/Kg		P	4/25/2016	11:30
gamma-BHC (Lindane)	< 6.33	ug/Kg			4/25/2016	11:30
Heptachlor	< 6.33	ug/Kg			4/25/2016	11:30
Heptachlor Epoxide	74.1	ug/Kg		P	4/25/2016	11:30
Methoxychlor	15.8	ug/Kg		P	4/25/2016	11:30
Toxaphene	< 63.3	ug/Kg			4/25/2016	11:30
trans-Chlordane	42.7	ug/Kg		P	4/25/2016	11:30
Surrogate	Percen	t Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	zed
Decachlorobiphenyl (1)	!	517	9.5 - 93.3	*	4/25/2016	11:30
Tetrachloro-m-xylene (1)	4	16.4	13.2 - 96.3		4/25/2016	11:30

Method Reference(s): EPA 8081B

EPA 3550C

**Preparation Date:** 4/21/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.3

 Lab Sample ID:
 161505-12
 Date Sampled:
 4/15/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

### Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1-Biphenyl	< 3160	ug/Kg		4/26/2016 08:58
1,2,4,5-Tetrachlorobenzene	< 3160	ug/Kg		4/26/2016 08:58
1,2,4-Trichlorobenzene	< 3160	ug/Kg		4/26/2016 08:58
1,2-Dichlorobenzene	< 3160	ug/Kg		4/26/2016 08:58
1,3-Dichlorobenzene	< 3160	ug/Kg		4/26/2016 08:58
1,4-Dichlorobenzene	< 3160	ug/Kg		4/26/2016 08:58
2,3,4,6-Tetrachlorophenol	< 3160	ug/Kg		4/26/2016 08:58
2,4,5-Trichlorophenol	< 6320	ug/Kg		4/26/2016 08:58
2,4,6-Trichlorophenol	< 3160	ug/Kg		4/26/2016 08:58
2,4-Dichlorophenol	< 3160	ug/Kg		4/26/2016 08:58
2,4-Dimethylphenol	< 3160	ug/Kg		4/26/2016 08:58
2,4-Dinitrophenol	< 6320	ug/Kg		4/26/2016 08:58
2,4-Dinitrotoluene	< 3160	ug/Kg		4/26/2016 08:58
2,6-Dinitrotoluene	< 3160	ug/Kg		4/26/2016 08:58
2-Chloronaphthalene	< 3160	ug/Kg		4/26/2016 08:58
2-Chlorophenol	< 3160	ug/Kg		4/26/2016 08:58
2-Methylnapthalene	< 3160	ug/Kg		4/26/2016 08:58
2-Methylphenol	< 3160	ug/Kg		4/26/2016 08:58
2-Nitroaniline	< 6320	ug/Kg		4/26/2016 08:58
2-Nitrophenol	< 3160	ug/Kg		4/26/2016 08:58
3&4-Methylphenol	< 3160	ug/Kg		4/26/2016 08:58
3,3'-Dichlorobenzidine	< 3160	ug/Kg		4/26/2016 08:58
3-Nitroaniline	< 6320	ug/Kg		4/26/2016 08:58
4,6-Dinitro-2-methylphenol	< 6320	ug/Kg		4/26/2016 08:58
4-Bromophenyl phenyl ether	< 3160	ug/Kg		4/26/2016 08:58
4-Chloro-3-methylphenol	< 3160	ug/Kg		4/26/2016 08:58
4-Chloroaniline	< 3160	ug/Kg		4/26/2016 08:58



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Project Reference:	1440 Empire i	oivu				
Sample Identifier:	C-8.3					
Lab Sample ID:	161505-12			Date Sampled:	4/15/2016	
Matrix:	Soil			Date Received:	4/19/2016	
4-Chlorophenyl pheny	ıl ether	< 3160	ug/Kg		4/26/2016	08:58
4-Nitroaniline		< 6320	ug/Kg		4/26/2016	08:58
4-Nitrophenol		< 6320	ug/Kg		4/26/2016	08:58
Acenaphthene		< 3160	ug/Kg		4/26/2016	08:58
Acenaphthylene		< 3160	ug/Kg		4/26/2016	08:58
Acetophenone		< 3160	ug/Kg		4/26/2016	08:58
Anthracene		2120	ug/Kg	J	4/26/2016	08:58
Atrazine		< 3160	ug/Kg		4/26/2016	08:58
Benzaldehyde		< 3160	ug/Kg		4/26/2016	08:58
Benzo (a) anthracene		26700	ug/Kg		4/26/2016	08:58
Benzo (a) pyrene		38100	ug/Kg		4/26/2016	08:58
Benzo (b) fluoranther	ie	52900	ug/Kg		4/26/2016	08:58
Benzo (g,h,i) perylene		34200	ug/Kg		4/26/2016	08:58
Benzo (k) fluoranther	ie	26300	ug/Kg		4/26/2016	08:58
Bis (2-chloroethoxy)	methane	< 3160	ug/Kg		4/26/2016	08:58
Bis (2-chloroethyl) et	her	< 3160	ug/Kg		4/26/2016	08:58
Bis (2-chloroisopropy	l) ether	< 3160	ug/Kg		4/26/2016	08:58
Bis (2-ethylhexyl) pht	halate	< 3160	ug/Kg		4/26/2016	08:58
Butylbenzylphthalate		< 3160	ug/Kg		4/26/2016	08:58
Caprolactam		< 3160	ug/Kg		4/26/2016	08:58
Carbazole		< 3160	ug/Kg		4/26/2016	08:58
Chrysene		33900	ug/Kg		4/26/2016	08:58
Dibenz (a,h) anthrace	ne	10900	ug/Kg		4/26/2016	08:58
Dibenzofuran		< 3160	ug/Kg		4/26/2016	08:58
Diethyl phthalate		< 3160	ug/Kg		4/26/2016	08:58
Dimethyl phthalate		< 6320	ug/Kg		4/26/2016	08:58
Di-n-butyl phthalate		< 3160	ug/Kg		4/26/2016	08:58
Di-n-octylphthalate		< 3160	ug/Kg		4/26/2016	08:58
Fluoranthene		31000	ug/Kg		4/26/2016	08:58
Fluorene		< 3160	ug/Kg		4/26/2016	08:58



Client: Ravi Engineering & Land Surveying, P.C.

C-83

**Project Reference:** 1440 Empire Blvd

Sample Identifier

Sample Identifier.	G-0.3		
Lab Sample ID:	161505-12	Date Sampled:	4/15/2016

Matrix: Soil **Date Received:** 4/19/2016 Hexachlorobenzene < 3160 ug/Kg 4/26/2016 08:58 Hexachlorobutadiene < 3160 ug/Kg 4/26/2016 08:58 Hexachlorocyclopentadiene < 3160 ug/Kg 4/26/2016 08:58 Hexachloroethane < 3160 ug/Kg 4/26/2016 08:58 Indeno (1,2,3-cd) pyrene 43100 ug/Kg 4/26/2016 08:58 4/26/2016 08:58 Isophorone < 3160 ug/Kg 4/26/2016 08:58 Naphthalene < 3160 ug/Kg Nitrobenzene < 3160 4/26/2016 08:58 ug/Kg N-Nitroso-di-n-propylamine < 3160 4/26/2016 08:58 ug/Kg N-Nitrosodiphenylamine 4/26/2016 08:58 < 3160 ug/Kg Pentachlorophenol 4/26/2016 08:58 < 6320 ug/Kg Phenanthrene 9590 ug/Kg 4/26/2016 08:58 ug/Kg Phenol < 3160 4/26/2016 08:58

Pyrene	<b>28500</b> ug/Kg			4/26/2016	08:58
Surrogate	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	zed
2,4,6-Tribromophenol	NC	26.8 - 101		4/26/2016	08:58
2-Fluorobiphenyl	NC	34.4 - 98.8		4/26/2016	08:58
2-Fluorophenol	NC	31.4 - 89.7		4/26/2016	08:58
Nitrobenzene-d5	NC	37.1 - 83.6		4/26/2016	08:58
Phenol-d5	NC	36.3 - 94.5		4/26/2016	08:58
Terphenyl-d14	NC	51.8 - 112		4/26/2016	08:58

**Method Reference(s):** EPA 8270D EPA 3550C

Preparation Date: 4/22/2016
Data File: B11284.D



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** C-8.3

 Lab Sample ID:
 161505-12
 Date Sampled:
 4/15/2016

 Matrix:
 Soil
 Date Received:
 4/19/2016

**Total Cyanide** 

<u>Analyte</u> <u>Result Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Cyanide, Total **0.560** mg/Kg 4/25/2016

Method Reference(s):EPA 9014Preparation Date:4/21/2016



## **Analytical Report Appendix**

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

- "<" = Analyzed for but not detected at or above the quantitation limit.
- "E" = Result has been estimated, calibration limit exceeded.
- "Z" = See case narrative.
- "D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
- "M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
- "B" = Method blank contained trace levels of analyte. Refer to included method blank report.
- "J" = Result estimated between the quantitation limit and half the quantitation limit.
- "L" = Laboratory Control Sample recovery outside accepted QC limits.
- "P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
- "NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
- "\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.
- "(1)" = Indicates data from primary column used for QC calculation.
- $"A" = denotes \ a \ parameter \ for \ which \ ELAP \ does \ not \ offer \ approval \ as \ part \ of \ their \ laboratory \ certification \ program.$
- "F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

### GENERAL TERMS AND CONDITIONS LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written. between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to reperform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any

environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.



# CHAIN OF CUSTODY

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Turnaround Time

Availability contingent upon lab approval; additional fees may apply.

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please indicate:

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please indicate: Other EDD

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Total Cost:



## Chain of Custody Supplement

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Lab Project ID:	161505	Date:	4/20/16
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### ANALYTICAL REPORT

Lab Number: L1611690

Client: Paradigm Environmental Services

179 Lake Avenue Rochester, NY 14608

ATTN: Rebecca Ross Phone: (585) 647-2530

Project Name: 161505
Project Number: 161505
Report Date: 04/27/16

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



**Project Name:** 161505 **Project Number:** 161505 Lab Number:

L1611690

**Report Date:** 04/27/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1611690-01	161505-10 C-8.1	SOIL	Not Specified	04/14/16 00:00	04/20/16
L1611690-02	161505-11 C-8.2	SOIL	Not Specified	04/14/16 00:00	04/20/16
L1611690-03	161505-12 C-8.3	SOIL	Not Specified	04/14/16 00:00	04/20/16



 Project Name:
 161505
 Lab Number:
 L1611690

 Project Number:
 161505
 Report Date:
 04/27/16

### **Case Narrative**

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please	contact	Client	Services	at 800	)-624-9220	with any	questions.



 Project Name:
 161505
 Lab Number:
 L1611690

 Project Number:
 161505
 Report Date:
 04/27/16

### **Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Solids, Total

L1611690-02 and -03: A Laboratory Duplicate was prepared with the sample batch, however, the native sample was not available for reporting; therefore, the laboratory duplicate results could not be reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Title: Technical Director/Representative Date: 04/27/16

Custen Walker Cristin Walker

# **ORGANICS**



# **PESTICIDES**



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

**SAMPLE RESULTS** 

Lab ID: L1611690-01
Client ID: 161505-10 C-8.1
Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 04/24/16 23:28

Analyst: EC Percent Solids: 88%

Methylation Date: 04/24/16 14:52

Date Collected: 04/14/16 00:00
Date Received: 04/20/16
Field Prep: Not Specified
Extraction Method:EPA 8151A
Extraction Date: 04/23/16 05:04

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column	
Chlorinated Herbicides by GC - Westborough Lab								
2,4,5-TP (Silvex)	ND		ug/kg	189	5.03	1	Α	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	104		30-150	А
DCAA	72		30-150	В



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

**SAMPLE RESULTS** 

Lab ID: L1611690-02
Client ID: 161505-11 C-8.2
Sample Location: Not Specified

Matrix: Soil Analytical Method: 1,8151A

Analytical Date: 04/24/16 23:48

Analyst: EC Percent Solids: 91%

Methylation Date: 04/24/16 14:52

Date Collected: 04/14/16 00:00
Date Received: 04/20/16
Field Prep: Not Specified
Extraction Method:EPA 8151A
Extraction Date: 04/23/16 05:04

Qualifier RL MDL **Parameter** Result Units **Dilution Factor** Column Chlorinated Herbicides by GC - Westborough Lab ND 2,4,5-TP (Silvex) ug/kg 182 4.84 1 Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	121		30-150	Α
DCAA	75		30-150	В

Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

**SAMPLE RESULTS** 

Lab ID: L1611690-03
Client ID: 161505-12 C-8.3
Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 04/25/16 00:07

Analyst: EC Percent Solids: 88%

Methylation Date: 04/24/16 14:52

Date Collected: 04/14/16 00:00
Date Received: 04/20/16
Field Prep: Not Specified
Extraction Method:EPA 8151A
Extraction Date: 04/23/16 05:04

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough	Lab						
2,4,5-TP (Silvex)	ND		ug/kg	190	5.04	1	А

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	115		30-150	Α
DCAA	193	Q	30-150	В



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

Method Blank Analysis Batch Quality Control

Analytical Method: Analytical Date: 1,8151A 04/24/16 21:11

Analyst:

EC

Methylation Date:

04/24/16 14:52

Extraction Method: EPA 8151A Extraction Date: 04/23/16 04:53

Parameter	Result	Qualifier	Units		RL	MDL	Column
Chlorinated Herbicides by GC - W	estborough l	_ab for sam	ple(s):	01-03	Batch:	WG886554-1	
2,4,5-TP (Silvex)	ND		ug/kg		163	4.33	А

		4	Acceptance	<del>)</del>
Surrogate	%Recovery	Qualifier	Criteria	Column
DCAA	140		30-150	Α
DCAA	96		30-150	В



# Lab Control Sample Analysis Batch Quality Control

Project Name: 161505
Project Number: 161505

Lab Number: L1611690

Report Date:

04/27/16

Parameter	LCS %Recovery	Qual		CSD covery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborou	gh Lab Associate	ed sample(s):	01-03	Batch:	WG886554-2	WG886554-3				
Dicamba	42			87		30-150	70	Q	30	Α
2,4-D	44			90		30-150	69	Q	30	А
2,4,5-T	44			91		30-150	70	Q	30	Α
2,4,5-TP (Silvex)	44			89		30-150	68	Q	30	А

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	46		106		30-150	Α
DCAA	40		79		30-150	В



# INORGANICS & MISCELLANEOUS



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

**SAMPLE RESULTS** 

Lab ID: L1611690-01 Date Collected: 04/14/16 00:00
Client ID: 161505-10 C-8.1 Date Received: 04/20/16

Client ID: 161505-10 C-8.1 Date Received: 04/20/16
Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lat	)								
Solids, Total	87.9		%	0.100	NA	1	-	04/22/16 23:43	121,2540G	VB
Chromium, Hexavalent	ND		mg/kg	0.91	0.18	1	04/26/16 17:50	04/26/16 22:56	1,7196A	RP



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

**SAMPLE RESULTS** 

Lab ID: Date Collected: 04/14/16 00:00

Client ID: 161505-11 C-8.2 Date Received: 04/20/16
Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lat	)								
Solids, Total	91.1		%	0.100	NA	1	-	04/21/16 12:56	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	0.88	0.18	1	04/26/16 17:50	04/26/16 22:56	1,7196A	RP



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

**SAMPLE RESULTS** 

Lab ID: L1611690-03 Date Collected: 04/14/16 00:00

Client ID: 161505-12 C-8.3 Date Received: 04/20/16
Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab	)								
Solids, Total	87.6		%	0.100	NA	1	-	04/21/16 12:56	121,2540G	RI
Chromium, Hexavalent	ND		mg/kg	0.91	0.18	1	04/26/16 17:50	04/26/16 22:56	1,7196A	RP



Project Name: 161505 Lab Number: L1611690

Project Number: 161505 Report Date: 04/27/16

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab for sam	ple(s): 01	-03 Ba	tch: W0	G887494-1				
Chromium, Hexavalent	ND	mg/kg	0.80	0.16	1	04/26/16 17:50	04/26/16 22:57	1,7196A	RP



# Lab Control Sample Analysis Batch Quality Control

**Project Name:** 161505 **Project Number:** 161505

Lab Number: L1611690

Report Date:

04/27/16

Parameter	LCS %Recovery Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
General Chemistry - Westborough Lab	Associated sample(s): 01-03	Batch: WG88749	4-2					
Chromium, Hexavalent	86	-		80-120	-		20	



# Matrix Spike Analysis Batch Quality Control

Project Name: 161505 Project Number: 161505 Lab Number:

L1611690

04/27/16

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual Found	MSD %Recovery G	Recovery Qual Limits	RPD (	RPD Qual Limits
General Chemistry - Westbo	orough Lab Asso	ciated sam	ple(s): 01-03	3 QC Batch II	D: WG887494-4	QC Sample: L16	311690-02 Client	ID: 16	31505-11 C-8.2
Chromium, Hexavalent	ND	804	940	120	-	-	75-125	-	20



# Lab Duplicate Analysis Batch Quality Control

**Project Name:** 161505 **Project Number:** 161505 Lab Number:

L1611690

Report Date:

04/27/16

Parameter	Native Samp	ple Duplicate San	nple Units	RPD	Qual RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01 QC	C Batch ID: WG886508-1	QC Sample: L1611	935-01 Client	t ID: DUP Sample
Solids, Total	62.0	61.5	%	1	20
General Chemistry - Westborough Lab	Associated sample(s): 01-03	QC Batch ID: WG887494-	6 QC Sample: L16	611690-02 CI	ient ID: 161505-11 C-8.2
Chromium, Hexavalent	ND	ND	mg/kg	NC	20



 Project Name:
 161505
 Lab Number:
 L1611690

 Project Number:
 161505
 Report Date:
 04/27/16

### **Sample Receipt and Container Information**

Were project specific reporting limits specified?

**Cooler Information Custody Seal** 

Cooler

A Absent

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1611690-01A	Glass 120ml/4oz unpreserved	Α	N/A	4.6	Υ	Absent	HERB-APA(14),TS(7),HEXCR-7196(30)
L1611690-02A	Glass 120ml/4oz unpreserved	Α	N/A	4.6	Υ	Absent	HERB-APA(14),TS(7),HEXCR-7196(30)
L1611690-03A	Glass 120ml/4oz unpreserved	Α	N/A	4.6	Υ	Absent	HERB-APA(14),TS(7),HEXCR-7196(30)



 Project Name:
 161505
 Lab Number:
 L1611690

 Project Number:
 161505
 Report Date:
 04/27/16

#### **GLOSSARY**

#### **Acronyms**

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of

PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes

or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes

or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from

dilutions, concentrations or moisture content, where applicable.

MS

- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for

which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

#### Footnotes

 The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method

#### Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

#### Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report with 'J' Qualifiers



 Project Name:
 161505
 Lab Number:
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 04/27/16

#### Data Qualifiers

- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



 Project Name:
 161505
 Lab Number:
 L1611690

 Project Number:
 161505
 Report Date:
 04/27/16

#### REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

#### **LIMITATION OF LIABILITIES**

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Published Date: 2/3/2016 10:23:10 AM

ID No.:17873

Revision 6

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Alpha Analytical, Inc. Facility: Company-wide

**Department: Quality Assurance** 

Title: Certificate/Approval Program Summary

### Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

EPA 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate

(soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-

Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols EPA 9251: NPW: Chloride SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

SM5310C: DW: Dissolved Organic Carbon

**Mansfield Facility** 

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids EPA 1631E: SCM: Mercury EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: 8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A: Lead; 8270D: bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; EPA 200.7: Ba,Be,Ca,Cd,Cr,Cu,Na; EPA 245.1: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1,

SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Pre-Qualtrax Document ID: 08-113 Document Type: Form

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

# **CHAIN OF CUSTODY**

L1611690

11148

PΔ	RADIO	M			REPORT	TO:				<b>West</b>	INV	OICE T	0:		13m23			Service on the	24.12			
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# Google Maps 1440 Empire Blvd

Sample Location Map - Building 7 excavation Samples Collected 2/12/16



Asterisks (\*) indicate a composite sample:

C-1 consists of samples R-1.1,1.2,1.3

C-2 consists of samples R-2.1, 2.2, 2.3

C-3 consists of samples R-3.1, 3.2, 3.3

C-4 consists of samples R-3.4, 3.5, 3.6

C-5 consists of samples R-6.1, 6.2,6.3

Imagery ©2016 Google, Map data ©2016 Google 50 ft ■



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-1.1

 Lab Sample ID:
 160673-01
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 3.84	ug/Kg		2/18/2016 18:41
1,1,2,2-Tetrachloroethane	< 3.84	ug/Kg		2/18/2016 18:41
1,1,2-Trichloroethane	< 3.84	ug/Kg		2/18/2016 18:41
1,1-Dichloroethane	< 3.84	ug/Kg		2/18/2016 18:41
1,1-Dichloroethene	< 3.84	ug/Kg		2/18/2016 18:41
1,2,3-Trichlorobenzene	< 9.59	ug/Kg		2/18/2016 18:41
1,2,4-Trichlorobenzene	< 9.59	ug/Kg		2/18/2016 18:41
1,2,4-Trimethylbenzene	< 3.84	ug/Kg		2/18/2016 18:41
1,2-Dibromo-3-Chloropropane	< 19.2	ug/Kg		2/18/2016 18:41
1,2-Dibromoethane	< 3.84	ug/Kg		2/18/2016 18:41
1,2-Dichlorobenzene	< 3.84	ug/Kg		2/18/2016 18:41
1,2-Dichloroethane	< 3.84	ug/Kg		2/18/2016 18:41
1,2-Dichloropropane	< 3.84	ug/Kg		2/18/2016 18:41
1,3,5-Trimethylbenzene	< 3.84	ug/Kg		2/18/2016 18:41
1,3-Dichlorobenzene	< 3.84	ug/Kg		2/18/2016 18:41
1,4-Dichlorobenzene	< 3.84	ug/Kg		2/18/2016 18:41
1,4-dioxane	< 38.4	ug/Kg		2/18/2016 18:41
2-Butanone	< 19.2	ug/Kg		2/18/2016 18:41
2-Hexanone	< 9.59	ug/Kg		2/18/2016 18:41
4-Methyl-2-pentanone	< 9.59	ug/Kg		2/18/2016 18:41
Acetone	< 19.2	ug/Kg		2/18/2016 18:41
Benzene	< 3.84	ug/Kg		2/18/2016 18:41
Bromochloromethane	< 9.59	ug/Kg		2/18/2016 18:41
Bromodichloromethane	< 3.84	ug/Kg		2/18/2016 18:41
Bromoform	< 9.59	ug/Kg		2/18/2016 18:41
Bromomethane	< 3.84	ug/Kg		2/18/2016 18:41
Carbon disulfide	< 3.84	ug/Kg		2/18/2016 18:41



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	R-1.1					
Lab Sample ID:	160673-01			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 3.84	ug/Kg		2/18/2016	18:4
Chlorobenzene		< 3.84	ug/Kg		2/18/2016	18:
Chloroethane		< 3.84	ug/Kg		2/18/2016	18:
Chloroform		< 3.84	ug/Kg		2/18/2016	18:
Chloromethane		< 3.84	ug/Kg		2/18/2016	18:
cis-1,2-Dichloroethene	9	< 3.84	ug/Kg		2/18/2016	18:
cis-1,3-Dichloroproper	ne	< 3.84	ug/Kg		2/18/2016	18:
Cyclohexane		< 19.2	ug/Kg		2/18/2016	18
Dibromochloromethan	ne	< 3.84	ug/Kg		2/18/2016	18
Dichlorodifluorometha	ane	< 3.84	ug/Kg		2/18/2016	18
Ethylbenzene		< 3.84	ug/Kg		2/18/2016	18
Freon 113		< 3.84	ug/Kg		2/18/2016	18
Isopropylbenzene		< 3.84	ug/Kg		2/18/2016	18
m,p-Xylene		< 3.84	ug/Kg		2/18/2016	18
Methyl acetate		< 3.84	ug/Kg		2/18/2016	18
Methyl tert-butyl Ethe	r	< 3.84	ug/Kg		2/18/2016	18
Methylcyclohexane		< 3.84	ug/Kg		2/18/2016	18
Methylene chloride		5.35	ug/Kg	J	2/18/2016	18
Naphthalene		< 9.59	ug/Kg		2/18/2016	18
n-Butylbenzene		< 3.84	ug/Kg		2/18/2016	18
n-Propylbenzene		< 3.84	ug/Kg		2/18/2016	18
o-Xylene		< 3.84	ug/Kg		2/18/2016	18
p-Isopropyltoluene		< 3.84	ug/Kg		2/18/2016	18
sec-Butylbenzene		< 3.84	ug/Kg		2/18/2016	18
Styrene		< 9.59	ug/Kg		2/18/2016	18
tert-Butylbenzene		< 3.84	ug/Kg		2/18/2016	18
Tetrachloroethene		16.4	ug/Kg		2/18/2016	18
Toluene		< 3.84	ug/Kg		2/18/2016	18
trans-1,2-Dichloroethe	ene	< 3.84	ug/Kg		2/18/2016	18
trans-1,3-Dichloroproj	pene	< 3.84	ug/Kg		2/18/2016	18



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-1.1

Lab Sample ID:160673-01Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Trichloroethene	4.97	ug/Kg	2/18/2016 18:41
Trichlorofluoromethane	< 3.84	ug/Kg	2/18/2016 18:41
Vinyl chloride	< 3.84	ug/Kg	2/18/2016 18:41

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	<u>zed</u>
1,2-Dichloroethane-d4	105	83 - 126		2/18/2016	18:41
4-Bromofluorobenzene	83.6	80.8 - 115		2/18/2016	18:41
Pentafluorobenzene	96.1	90.6 - 111		2/18/2016	18:41
Toluene-D8	92.2	89.2 - 109		2/18/2016	18:41

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29705.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-1.2

Lab Sample ID:160673-02Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

### **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.50	ug/Kg		2/18/2016 19:04
1,1,2,2-Tetrachloroethane	< 4.50	ug/Kg		2/18/2016 19:04
1,1,2-Trichloroethane	< 4.50	ug/Kg		2/18/2016 19:04
1,1-Dichloroethane	< 4.50	ug/Kg		2/18/2016 19:04
1,1-Dichloroethene	< 4.50	ug/Kg		2/18/2016 19:04
1,2,3-Trichlorobenzene	< 11.2	ug/Kg		2/18/2016 19:04
1,2,4-Trichlorobenzene	< 11.2	ug/Kg		2/18/2016 19:04
1,2,4-Trimethylbenzene	< 4.50	ug/Kg		2/18/2016 19:04
1,2-Dibromo-3-Chloropropane	< 22.5	ug/Kg		2/18/2016 19:04
1,2-Dibromoethane	< 4.50	ug/Kg		2/18/2016 19:04
1,2-Dichlorobenzene	< 4.50	ug/Kg		2/18/2016 19:04
1,2-Dichloroethane	< 4.50	ug/Kg		2/18/2016 19:04
1,2-Dichloropropane	< 4.50	ug/Kg		2/18/2016 19:04
1,3,5-Trimethylbenzene	< 4.50	ug/Kg		2/18/2016 19:04
1,3-Dichlorobenzene	< 4.50	ug/Kg		2/18/2016 19:04
1,4-Dichlorobenzene	< 4.50	ug/Kg		2/18/2016 19:04
1,4-dioxane	< 45.0	ug/Kg		2/18/2016 19:04
2-Butanone	< 22.5	ug/Kg		2/18/2016 19:04
2-Hexanone	< 11.2	ug/Kg		2/18/2016 19:04
4-Methyl-2-pentanone	< 11.2	ug/Kg		2/18/2016 19:04
Acetone	< 22.5	ug/Kg		2/18/2016 19:04
Benzene	< 4.50	ug/Kg		2/18/2016 19:04
Bromochloromethane	< 11.2	ug/Kg		2/18/2016 19:04
Bromodichloromethane	< 4.50	ug/Kg		2/18/2016 19:04
Bromoform	< 11.2	ug/Kg		2/18/2016 19:04
Bromomethane	< 4.50	ug/Kg		2/18/2016 19:04
Carbon disulfide	< 4.50	ug/Kg		2/18/2016 19:04



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject Reference:	1440 Empire B	orvu			
Sample Identifier:	R-1.2				
Lab Sample ID:	160673-02			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
Carbon Tetrachloride		< 4.50	ug/Kg		2/18/2016 19
Chlorobenzene		< 4.50	ug/Kg		2/18/2016 19
Chloroethane		< 4.50	ug/Kg		2/18/2016 19
Chloroform		< 4.50	ug/Kg		2/18/2016 19
Chloromethane		< 4.50	ug/Kg		2/18/2016 19
cis-1,2-Dichloroethene		< 4.50	ug/Kg		2/18/2016 19
cis-1,3-Dichloropropene		< 4.50	ug/Kg		2/18/2016 19
Cyclohexane		< 22.5	ug/Kg		2/18/2016 19
Dibromochloromethane		< 4.50	ug/Kg		2/18/2016 19
Dichlorodifluoromethan	e	< 4.50	ug/Kg		2/18/2016 19
Ethylbenzene		< 4.50	ug/Kg		2/18/2016 19
Freon 113		< 4.50	ug/Kg		2/18/2016 19
Isopropylbenzene		< 4.50	ug/Kg		2/18/2016 19
m,p-Xylene		< 4.50	ug/Kg		2/18/2016 19
Methyl acetate		< 4.50	ug/Kg		2/18/2016 19
Methyl tert-butyl Ether		< 4.50	ug/Kg		2/18/2016 19
Methylcyclohexane		< 4.50	ug/Kg		2/18/2016 19
Methylene chloride		< 11.2	ug/Kg		2/18/2016 19
Naphthalene		< 11.2	ug/Kg		2/18/2016 19
n-Butylbenzene		< 4.50	ug/Kg		2/18/2016 19
n-Propylbenzene		< 4.50	ug/Kg		2/18/2016 19
o-Xylene		< 4.50	ug/Kg		2/18/2016 19
p-Isopropyltoluene		< 4.50	ug/Kg		2/18/2016 19
sec-Butylbenzene		< 4.50	ug/Kg		2/18/2016 19
Styrene		< 11.2	ug/Kg		2/18/2016 19
tert-Butylbenzene		< 4.50	ug/Kg		2/18/2016 19
Tetrachloroethene		11.3	ug/Kg		2/18/2016 19
Toluene		< 4.50	ug/Kg		2/18/2016 19
trans-1,2-Dichloroethene	9	< 4.50	ug/Kg		2/18/2016 19
trans-1,3-Dichloroprope	ne	< 4.50	ug/Kg		2/18/2016 19



J

2/18/2016 19:04

19:04

2/18/2016

Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-1.2

Trichloroethene

Toluene-D8

Lab Sample ID:160673-02Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

4.11

Trichlorofluoromethane	< 4.50	ug/Kg			2/18/2016	19:04
Vinyl chloride	< 4.50	ug/Kg			2/18/2016	19:04
<u>Surrogate</u>	<u>Percen</u>	<u>it Recovery</u>	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>zed</u>
1,2-Dichloroethane-d4		106	83 - 126		2/18/2016	19:04
4-Bromofluorobenzene	:	85.3	80.8 - 115		2/18/2016	19:04
Pentafluorobenzene	•	94.2	90.6 - 111		2/18/2016	19:04

91.8

ug/Kg

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29706.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.

89.2 - 109



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-1.3

 Lab Sample ID:
 160673-03
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<u>Qualifier</u>	Date Analyzed
1,1,1-Trichloroethane	< 4.60	ug/Kg		2/18/2016 19:28
1,1,2,2-Tetrachloroethane	< 4.60	ug/Kg		2/18/2016 19:28
1,1,2-Trichloroethane	< 4.60	ug/Kg		2/18/2016 19:28
1,1-Dichloroethane	< 4.60	ug/Kg		2/18/2016 19:28
1,1-Dichloroethene	< 4.60	ug/Kg		2/18/2016 19:28
1,2,3-Trichlorobenzene	< 11.5	ug/Kg		2/18/2016 19:28
1,2,4-Trichlorobenzene	< 11.5	ug/Kg		2/18/2016 19:28
1,2,4-Trimethylbenzene	< 4.60	ug/Kg		2/18/2016 19:28
1,2-Dibromo-3-Chloropropane	< 23.0	ug/Kg		2/18/2016 19:28
1,2-Dibromoethane	< 4.60	ug/Kg		2/18/2016 19:28
1,2-Dichlorobenzene	< 4.60	ug/Kg		2/18/2016 19:28
1,2-Dichloroethane	< 4.60	ug/Kg		2/18/2016 19:28
1,2-Dichloropropane	< 4.60	ug/Kg		2/18/2016 19:28
1,3,5-Trimethylbenzene	< 4.60	ug/Kg		2/18/2016 19:28
1,3-Dichlorobenzene	< 4.60	ug/Kg		2/18/2016 19:28
1,4-Dichlorobenzene	< 4.60	ug/Kg		2/18/2016 19:28
1,4-dioxane	< 46.0	ug/Kg		2/18/2016 19:28
2-Butanone	< 23.0	ug/Kg		2/18/2016 19:28
2-Hexanone	< 11.5	ug/Kg		2/18/2016 19:28
4-Methyl-2-pentanone	< 11.5	ug/Kg		2/18/2016 19:28
Acetone	< 23.0	ug/Kg		2/18/2016 19:28
Benzene	< 4.60	ug/Kg		2/18/2016 19:28
Bromochloromethane	< 11.5	ug/Kg		2/18/2016 19:28
Bromodichloromethane	< 4.60	ug/Kg		2/18/2016 19:28
Bromoform	< 11.5	ug/Kg		2/18/2016 19:28
Bromomethane	< 4.60	ug/Kg		2/18/2016 19:28
Carbon disulfide	< 4.60	ug/Kg		2/18/2016 19:28



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

ample Identifier:	R-1.3					
ab Sample ID:	160673-03			Date Sampled:	2/12/2016	
latrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 4.60	ug/Kg		2/18/2016	19:2
Chlorobenzene		< 4.60	ug/Kg		2/18/2016	19:2
Chloroethane		< 4.60	ug/Kg		2/18/2016	19:
Chloroform		< 4.60	ug/Kg		2/18/2016	19:
Chloromethane		< 4.60	ug/Kg		2/18/2016	19:
cis-1,2-Dichloroethene		< 4.60	ug/Kg		2/18/2016	19:
cis-1,3-Dichloroproper	ie	< 4.60	ug/Kg		2/18/2016	19:
Cyclohexane		< 23.0	ug/Kg		2/18/2016	19:
Dibromochloromethan	e	< 4.60	ug/Kg		2/18/2016	19:
Dichlorodifluorometha	ne	< 4.60	ug/Kg		2/18/2016	19:
Ethylbenzene		< 4.60	ug/Kg		2/18/2016	19:
Freon 113		< 4.60	ug/Kg		2/18/2016	19:
Isopropylbenzene		< 4.60	ug/Kg		2/18/2016	19:
m,p-Xylene		< 4.60	ug/Kg		2/18/2016	19:
Methyl acetate		< 4.60	ug/Kg		2/18/2016	19:
Methyl tert-butyl Ether		< 4.60	ug/Kg		2/18/2016	19:
Methylcyclohexane		< 4.60	ug/Kg		2/18/2016	19:
Methylene chloride		< 11.5	ug/Kg		2/18/2016	19:
Naphthalene		< 11.5	ug/Kg		2/18/2016	19:
n-Butylbenzene		< 4.60	ug/Kg		2/18/2016	19:
n-Propylbenzene		< 4.60	ug/Kg		2/18/2016	19:
o-Xylene		< 4.60	ug/Kg		2/18/2016	19:
p-Isopropyltoluene		< 4.60	ug/Kg		2/18/2016	19:
sec-Butylbenzene		< 4.60	ug/Kg		2/18/2016	19:
Styrene		< 11.5	ug/Kg		2/18/2016	19:
tert-Butylbenzene		< 4.60	ug/Kg		2/18/2016	19:
Tetrachloroethene		8.08	ug/Kg		2/18/2016	19:
Toluene		< 4.60	ug/Kg		2/18/2016	19:
trans-1,2-Dichloroethe	ne	< 4.60	ug/Kg		2/18/2016	19:
trans-1,3-Dichloroprop	ene	< 4.60	ug/Kg		2/18/2016	19:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-1.3

Lab Sample ID:160673-03Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Trichloroethene	< 4.60	ug/Kg	2/18/2016 19:28
Trichlorofluoromethane	< 4.60	ug/Kg	2/18/2016 19:28
Vinyl chloride	< 4.60	ug/Kg	2/18/2016 19:28

<u>Surrogate</u>	Percent Recovery	<u>'ercent Recovery Limits C</u>		<u>Date Analyzed</u>			
1,2-Dichloroethane-d4	107	83 - 126		2/18/2016	19:28		
4-Bromofluorobenzene	89.2	80.8 - 115		2/18/2016	19:28		
Pentafluorobenzene	96.5	90.6 - 111		2/18/2016	19:28		
Toluene-D8	93.2	89.2 - 109		2/18/2016	19:28		

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29707.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-2.1

Lab Sample ID:160673-04Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

### **Volatile Organics**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1,1-Trichloroethane	< 3.68	ug/Kg		2/18/2016 19:52
1,1,2,2-Tetrachloroethane	< 3.68	ug/Kg		2/18/2016 19:52
1,1,2-Trichloroethane	< 3.68	ug/Kg		2/18/2016 19:52
1,1-Dichloroethane	< 3.68	ug/Kg		2/18/2016 19:52
1,1-Dichloroethene	< 3.68	ug/Kg		2/18/2016 19:52
1,2,3-Trichlorobenzene	< 9.20	ug/Kg		2/18/2016 19:52
1,2,4-Trichlorobenzene	< 9.20	ug/Kg		2/18/2016 19:52
1,2,4-Trimethylbenzene	< 3.68	ug/Kg		2/18/2016 19:52
1,2-Dibromo-3-Chloropropane	< 18.4	ug/Kg		2/18/2016 19:52
1,2-Dibromoethane	< 3.68	ug/Kg		2/18/2016 19:52
1,2-Dichlorobenzene	< 3.68	ug/Kg		2/18/2016 19:52
1,2-Dichloroethane	< 3.68	ug/Kg		2/18/2016 19:52
1,2-Dichloropropane	< 3.68	ug/Kg		2/18/2016 19:52
1,3,5-Trimethylbenzene	< 3.68	ug/Kg		2/18/2016 19:52
1,3-Dichlorobenzene	< 3.68	ug/Kg		2/18/2016 19:52
1,4-Dichlorobenzene	< 3.68	ug/Kg		2/18/2016 19:52
1,4-dioxane	< 36.8	ug/Kg		2/18/2016 19:52
2-Butanone	< 18.4	ug/Kg		2/18/2016 19:52
2-Hexanone	< 9.20	ug/Kg		2/18/2016 19:52
4-Methyl-2-pentanone	< 9.20	ug/Kg		2/18/2016 19:52
Acetone	< 18.4	ug/Kg		2/18/2016 19:52
Benzene	< 3.68	ug/Kg		2/18/2016 19:52
Bromochloromethane	< 9.20	ug/Kg		2/18/2016 19:52
Bromodichloromethane	< 3.68	ug/Kg		2/18/2016 19:52
Bromoform	< 9.20	ug/Kg		2/18/2016 19:52
Bromomethane	< 3.68	ug/Kg		2/18/2016 19:52
Carbon disulfide	< 3.68	ug/Kg		2/18/2016 19:52



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

- I o je ce i ke i e i e i e i e i e i e i e i e i	r i o Empire B	174				
Sample Identifier:	R-2.1					
Lab Sample ID:	160673-04			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 3.68	ug/Kg		2/18/2016	19:5
Chlorobenzene		< 3.68	ug/Kg		2/18/2016	19:5
Chloroethane		< 3.68	ug/Kg		2/18/2016	19:5
Chloroform		< 3.68	ug/Kg		2/18/2016	19:5
Chloromethane		< 3.68	ug/Kg		2/18/2016	19:5
cis-1,2-Dichloroethene		< 3.68	ug/Kg		2/18/2016	19:5
cis-1,3-Dichloropropene		< 3.68	ug/Kg		2/18/2016	19:5
Cyclohexane		< 18.4	ug/Kg		2/18/2016	19:5
Dibromochloromethane		< 3.68	ug/Kg		2/18/2016	19:5
Dichlorodifluoromethane	e	< 3.68	ug/Kg		2/18/2016	19:5
Ethylbenzene		< 3.68	ug/Kg		2/18/2016	19:52
Freon 113		< 3.68	ug/Kg		2/18/2016	19:52
Isopropylbenzene		< 3.68	ug/Kg		2/18/2016	19:52
m,p-Xylene		< 3.68	ug/Kg		2/18/2016	19:52
Methyl acetate		< 3.68	ug/Kg		2/18/2016	19:52
Methyl tert-butyl Ether		< 3.68	ug/Kg		2/18/2016	19:5
Methylcyclohexane		< 3.68	ug/Kg		2/18/2016	19:5
Methylene chloride		< 9.20	ug/Kg		2/18/2016	19:5
Naphthalene		< 9.20	ug/Kg		2/18/2016	19:5
n-Butylbenzene		< 3.68	ug/Kg		2/18/2016	19:5
n-Propylbenzene		< 3.68	ug/Kg		2/18/2016	19:5
o-Xylene		< 3.68	ug/Kg		2/18/2016	19:5
p-Isopropyltoluene		< 3.68	ug/Kg		2/18/2016	19:5
sec-Butylbenzene		< 3.68	ug/Kg		2/18/2016	19:5
Styrene		< 9.20	ug/Kg		2/18/2016	19:5
tert-Butylbenzene		< 3.68	ug/Kg		2/18/2016	19:5
Tetrachloroethene		12.0	ug/Kg		2/18/2016	19:52
Toluene		< 3.68	ug/Kg		2/18/2016	19:52
trans-1,2-Dichloroethene	e	< 3.68	ug/Kg		2/18/2016	19:52
trans-1,3-Dichloroprope	ne	< 3.68	ug/Kg		2/18/2016	19:5



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-2.1

 Lab Sample ID:
 160673-04
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

<u>Surrogate</u>	<u>Percei</u>	nt Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analyzed</b>
Vinyl chloride	< 3.68	ug/Kg			2/18/2016 19:52
Trichlorofluoromethane	< 3.68	ug/Kg			2/18/2016 19:52
Trichloroethene	< 3.68	ug/Kg			2/18/2016 19:52

<u> </u>	1 010011011000.019		O GLULIUL D	2 000 111101	200
1,2-Dichloroethane-d4	109	83 - 126		2/18/2016	19:52
4-Bromofluorobenzene	90.0	80.8 - 115		2/18/2016	19:52
Pentafluorobenzene	94.7	90.6 - 111		2/18/2016	19:52
Toluene-D8	92.1	89.2 - 109		2/18/2016	19:52

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29708.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-2.2

Lab Sample ID:160673-05Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

### **Volatile Organics**

Analyte	Result	<u>Units</u>	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.78	ug/Kg		2/18/2016 20:16
1,1,2,2-Tetrachloroethane	< 4.78	ug/Kg		2/18/2016 20:16
1,1,2-Trichloroethane	< 4.78	ug/Kg		2/18/2016 20:16
1,1-Dichloroethane	< 4.78	ug/Kg		2/18/2016 20:16
1,1-Dichloroethene	< 4.78	ug/Kg		2/18/2016 20:16
1,2,3-Trichlorobenzene	< 12.0	ug/Kg		2/18/2016 20:16
1,2,4-Trichlorobenzene	< 12.0	ug/Kg		2/18/2016 20:16
1,2,4-Trimethylbenzene	< 4.78	ug/Kg		2/18/2016 20:16
1,2-Dibromo-3-Chloropropane	< 23.9	ug/Kg		2/18/2016 20:16
1,2-Dibromoethane	< 4.78	ug/Kg		2/18/2016 20:16
1,2-Dichlorobenzene	< 4.78	ug/Kg		2/18/2016 20:16
1,2-Dichloroethane	< 4.78	ug/Kg		2/18/2016 20:16
1,2-Dichloropropane	< 4.78	ug/Kg		2/18/2016 20:16
1,3,5-Trimethylbenzene	< 4.78	ug/Kg		2/18/2016 20:16
1,3-Dichlorobenzene	< 4.78	ug/Kg		2/18/2016 20:16
1,4-Dichlorobenzene	< 4.78	ug/Kg		2/18/2016 20:16
1,4-dioxane	< 47.8	ug/Kg		2/18/2016 20:16
2-Butanone	< 23.9	ug/Kg		2/18/2016 20:16
2-Hexanone	< 12.0	ug/Kg		2/18/2016 20:16
4-Methyl-2-pentanone	< 12.0	ug/Kg		2/18/2016 20:16
Acetone	< 23.9	ug/Kg		2/18/2016 20:16
Benzene	< 4.78	ug/Kg		2/18/2016 20:16
Bromochloromethane	< 12.0	ug/Kg		2/18/2016 20:16
Bromodichloromethane	< 4.78	ug/Kg		2/18/2016 20:16
Bromoform	< 12.0	ug/Kg		2/18/2016 20:16
Bromomethane	< 4.78	ug/Kg		2/18/2016 20:16
Carbon disulfide	< 4.78	ug/Kg		2/18/2016 20:16



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Project Reference:	1440 Empire E	Blvd			
Sample Identifier:	R-2.2				
Lab Sample ID:	160673-05			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
Carbon Tetrachloride		< 4.78	ug/Kg		2/18/2016 20:1
Chlorobenzene		< 4.78	ug/Kg		2/18/2016 20:1
Chloroethane		< 4.78	ug/Kg		2/18/2016 20:1
Chloroform		< 4.78	ug/Kg		2/18/2016 20:1
Chloromethane		< 4.78	ug/Kg		2/18/2016 20:1
cis-1,2-Dichloroethene		< 4.78	ug/Kg		2/18/2016 20:1
cis-1,3-Dichloropropene	2	< 4.78	ug/Kg		2/18/2016 20:1
Cyclohexane		< 23.9	ug/Kg		2/18/2016 20:1
Dibromochloromethane		< 4.78	ug/Kg		2/18/2016 20:1
Dichlorodifluoromethan	ie	< 4.78	ug/Kg		2/18/2016 20:1
Ethylbenzene		< 4.78	ug/Kg		2/18/2016 20:1
Freon 113		< 4.78	ug/Kg		2/18/2016 20:1
Isopropylbenzene		< 4.78	ug/Kg		2/18/2016 20:1
m,p-Xylene		< 4.78	ug/Kg		2/18/2016 20:1
Methyl acetate		< 4.78	ug/Kg		2/18/2016 20:1
Methyl tert-butyl Ether		< 4.78	ug/Kg		2/18/2016 20:1
Methylcyclohexane		< 4.78	ug/Kg		2/18/2016 20:1
Methylene chloride		< 12.0	ug/Kg		2/18/2016 20:1
Naphthalene		< 12.0	ug/Kg		2/18/2016 20:1
n-Butylbenzene		< 4.78	ug/Kg		2/18/2016 20:1
n-Propylbenzene		< 4.78	ug/Kg		2/18/2016 20:1
o-Xylene		< 4.78	ug/Kg		2/18/2016 20:1
p-Isopropyltoluene		< 4.78	ug/Kg		2/18/2016 20:1
sec-Butylbenzene		< 4.78	ug/Kg		2/18/2016 20:1
Styrene		< 12.0	ug/Kg		2/18/2016 20:1
tert-Butylbenzene		< 4.78	ug/Kg		2/18/2016 20:1
Tetrachloroethene		11.8	ug/Kg		2/18/2016 20:1
Toluene		< 4.78	ug/Kg		2/18/2016 20:1
trans-1,2-Dichloroethen	e	< 4.78	ug/Kg		2/18/2016 20:1
trans-1,3-Dichloroprope	ene	< 4.78	ug/Kg		2/18/2016 20:1
• •					



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-2.2

Lab Sample ID:160673-05Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

 Trichloroethene
 < 4.78</td>
 ug/Kg
 2/18/2016
 20:16

 Trichlorofluoromethane
 < 4.78</td>
 ug/Kg
 2/18/2016
 20:16

 Vinyl chloride
 < 4.78</td>
 ug/Kg
 2/18/2016
 20:16

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<u>Date Analy</u>	<u>vzed</u>
1,2-Dichloroethane-d4	106	83 - 126		2/18/2016	20:16
4-Bromofluorobenzene	87.8	80.8 - 115		2/18/2016	20:16
Pentafluorobenzene	94.1	90.6 - 111		2/18/2016	20:16
Toluene-D8	92.3	89.2 - 109		2/18/2016	20:16

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29709.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-2.3

 Lab Sample ID:
 160673-06
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

# **Volatile Organics**

Analyte	Result	<u>Units</u>	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 5.01	ug/Kg		2/18/2016 20:40
1,1,2,2-Tetrachloroethane	< 5.01	ug/Kg		2/18/2016 20:40
1,1,2-Trichloroethane	< 5.01	ug/Kg		2/18/2016 20:40
1,1-Dichloroethane	< 5.01	ug/Kg		2/18/2016 20:40
1,1-Dichloroethene	< 5.01	ug/Kg		2/18/2016 20:40
1,2,3-Trichlorobenzene	< 12.5	ug/Kg		2/18/2016 20:40
1,2,4-Trichlorobenzene	< 12.5	ug/Kg		2/18/2016 20:40
1,2,4-Trimethylbenzene	< 5.01	ug/Kg		2/18/2016 20:40
1,2-Dibromo-3-Chloropropane	< 25.0	ug/Kg		2/18/2016 20:40
1,2-Dibromoethane	< 5.01	ug/Kg		2/18/2016 20:40
1,2-Dichlorobenzene	< 5.01	ug/Kg		2/18/2016 20:40
1,2-Dichloroethane	< 5.01	ug/Kg		2/18/2016 20:40
1,2-Dichloropropane	< 5.01	ug/Kg		2/18/2016 20:40
1,3,5-Trimethylbenzene	< 5.01	ug/Kg		2/18/2016 20:40
1,3-Dichlorobenzene	< 5.01	ug/Kg		2/18/2016 20:40
1,4-Dichlorobenzene	< 5.01	ug/Kg		2/18/2016 20:40
1,4-dioxane	< 50.1	ug/Kg		2/18/2016 20:40
2-Butanone	< 25.0	ug/Kg		2/18/2016 20:40
2-Hexanone	< 12.5	ug/Kg		2/18/2016 20:40
4-Methyl-2-pentanone	< 12.5	ug/Kg		2/18/2016 20:40
Acetone	< 25.0	ug/Kg		2/18/2016 20:40
Benzene	< 5.01	ug/Kg		2/18/2016 20:40
Bromochloromethane	< 12.5	ug/Kg		2/18/2016 20:40
Bromodichloromethane	< 5.01	ug/Kg		2/18/2016 20:40
Bromoform	< 12.5	ug/Kg		2/18/2016 20:40
Bromomethane	< 5.01	ug/Kg		2/18/2016 20:40
Carbon disulfide	< 5.01	ug/Kg		2/18/2016 20:40



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

	1440 Empire b	174				
Sample Identifier:	R-2.3					_
Lab Sample ID:	160673-06			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 5.01	ug/Kg		2/18/2016	20:40
Chlorobenzene		< 5.01	ug/Kg		2/18/2016	20:40
Chloroethane		< 5.01	ug/Kg		2/18/2016	20:40
Chloroform		< 5.01	ug/Kg		2/18/2016	20:40
Chloromethane		< 5.01	ug/Kg		2/18/2016	20:40
cis-1,2-Dichloroethene		< 5.01	ug/Kg		2/18/2016	20:40
cis-1,3-Dichloropropene		< 5.01	ug/Kg		2/18/2016	20:40
Cyclohexane		< 25.0	ug/Kg		2/18/2016	20:40
Dibromochloromethane		< 5.01	ug/Kg		2/18/2016	20:40
Dichlorodifluoromethan	e	< 5.01	ug/Kg		2/18/2016	20:40
Ethylbenzene		< 5.01	ug/Kg		2/18/2016	20:40
Freon 113		< 5.01	ug/Kg		2/18/2016	20:40
Isopropylbenzene		< 5.01	ug/Kg		2/18/2016	20:40
m,p-Xylene		< 5.01	ug/Kg		2/18/2016	20:40
Methyl acetate		< 5.01	ug/Kg		2/18/2016	20:40
Methyl tert-butyl Ether		< 5.01	ug/Kg		2/18/2016	20:40
Methylcyclohexane		< 5.01	ug/Kg		2/18/2016	20:40
Methylene chloride		< 12.5	ug/Kg		2/18/2016	20:40
Naphthalene		< 12.5	ug/Kg		2/18/2016	20:40
n-Butylbenzene		< 5.01	ug/Kg		2/18/2016	20:40
n-Propylbenzene		< 5.01	ug/Kg		2/18/2016	20:40
o-Xylene		< 5.01	ug/Kg		2/18/2016	20:40
p-Isopropyltoluene		< 5.01	ug/Kg		2/18/2016	20:40
sec-Butylbenzene		< 5.01	ug/Kg		2/18/2016	20:40
Styrene		< 12.5	ug/Kg		2/18/2016	20:40
tert-Butylbenzene		< 5.01	ug/Kg		2/18/2016	20:40
Tetrachloroethene		13.8	ug/Kg		2/18/2016	20:40
Toluene		< 5.01	ug/Kg		2/18/2016	20:40
trans-1,2-Dichloroethene	e	< 5.01	ug/Kg		2/18/2016	20:40
trans-1,3-Dichloroprope	ne	< 5.01	ug/Kg		2/18/2016	20:40



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-2.3

Lab Sample ID:160673-06Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Trichloroethene	< 5.01	ug/Kg	2/18/2016 20:40
Trichlorofluoromethane	< 5.01	ug/Kg	2/18/2016 20:40
Vinyl chloride	< 5.01	ug/Kg	2/18/2016 20:40

<b>Surrogate</b>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	<u>zed</u>
1,2-Dichloroethane-d4	107	83 - 126		2/18/2016	20:40
4-Bromofluorobenzene	86.2	80.8 - 115		2/18/2016	20:40
Pentafluorobenzene	96.4	90.6 - 111		2/18/2016	20:40
Toluene-D8	92.9	89.2 - 109		2/18/2016	20:40

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29710.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.1

 Lab Sample ID:
 160673-07
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.20	ug/Kg		2/18/2016 21:04
1,1,2,2-Tetrachloroethane	< 4.20	ug/Kg		2/18/2016 21:04
1,1,2-Trichloroethane	< 4.20	ug/Kg		2/18/2016 21:04
1,1-Dichloroethane	< 4.20	ug/Kg		2/18/2016 21:04
1,1-Dichloroethene	< 4.20	ug/Kg		2/18/2016 21:04
1,2,3-Trichlorobenzene	< 10.5	ug/Kg		2/18/2016 21:04
1,2,4-Trichlorobenzene	< 10.5	ug/Kg		2/18/2016 21:04
1,2,4-Trimethylbenzene	< 4.20	ug/Kg		2/18/2016 21:04
1,2-Dibromo-3-Chloropropane	< 21.0	ug/Kg		2/18/2016 21:04
1,2-Dibromoethane	< 4.20	ug/Kg		2/18/2016 21:04
1,2-Dichlorobenzene	< 4.20	ug/Kg		2/18/2016 21:04
1,2-Dichloroethane	< 4.20	ug/Kg		2/18/2016 21:04
1,2-Dichloropropane	< 4.20	ug/Kg		2/18/2016 21:04
1,3,5-Trimethylbenzene	< 4.20	ug/Kg		2/18/2016 21:04
1,3-Dichlorobenzene	< 4.20	ug/Kg		2/18/2016 21:04
1,4-Dichlorobenzene	< 4.20	ug/Kg		2/18/2016 21:04
1,4-dioxane	< 42.0	ug/Kg		2/18/2016 21:04
2-Butanone	< 21.0	ug/Kg		2/18/2016 21:04
2-Hexanone	< 10.5	ug/Kg		2/18/2016 21:04
4-Methyl-2-pentanone	< 10.5	ug/Kg		2/18/2016 21:04
Acetone	< 21.0	ug/Kg		2/18/2016 21:04
Benzene	< 4.20	ug/Kg		2/18/2016 21:04
Bromochloromethane	< 10.5	ug/Kg		2/18/2016 21:04
Bromodichloromethane	< 4.20	ug/Kg		2/18/2016 21:04
Bromoform	< 10.5	ug/Kg		2/18/2016 21:04
Bromomethane	< 4.20	ug/Kg		2/18/2016 21:04
Carbon disulfide	< 4.20	ug/Kg		2/18/2016 21:04



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Project Reference:	1440 Empire B	Slvd			
Sample Identifier:	R-3.1				
Lab Sample ID:	160673-07			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
Carbon Tetrachloride		< 4.20	ug/Kg		2/18/2016 21:0
Chlorobenzene		< 4.20	ug/Kg		2/18/2016 21:0
Chloroethane		< 4.20	ug/Kg		2/18/2016 21:0
Chloroform		< 4.20	ug/Kg		2/18/2016 21:04
Chloromethane		< 4.20	ug/Kg		2/18/2016 21:0
cis-1,2-Dichloroethene		< 4.20	ug/Kg		2/18/2016 21:04
cis-1,3-Dichloropropene		< 4.20	ug/Kg		2/18/2016 21:04
Cyclohexane		< 21.0	ug/Kg		2/18/2016 21:0
Dibromochloromethane		< 4.20	ug/Kg		2/18/2016 21:0
Dichlorodifluoromethan	e	< 4.20	ug/Kg		2/18/2016 21:0
Ethylbenzene		< 4.20	ug/Kg		2/18/2016 21:0
Freon 113		< 4.20	ug/Kg		2/18/2016 21:0
Isopropylbenzene		< 4.20	ug/Kg		2/18/2016 21:04
m,p-Xylene		< 4.20	ug/Kg		2/18/2016 21:04
Methyl acetate		< 4.20	ug/Kg		2/18/2016 21:04
Methyl tert-butyl Ether		< 4.20	ug/Kg		2/18/2016 21:04
Methylcyclohexane		< 4.20	ug/Kg		2/18/2016 21:04
Methylene chloride		< 10.5	ug/Kg		2/18/2016 21:0
Naphthalene		< 10.5	ug/Kg		2/18/2016 21:04
n-Butylbenzene		< 4.20	ug/Kg		2/18/2016 21:04
n-Propylbenzene		< 4.20	ug/Kg		2/18/2016 21:0
o-Xylene		< 4.20	ug/Kg		2/18/2016 21:04
p-Isopropyltoluene		< 4.20	ug/Kg		2/18/2016 21:04
sec-Butylbenzene		< 4.20	ug/Kg		2/18/2016 21:04
Styrene		< 10.5	ug/Kg		2/18/2016 21:0
tert-Butylbenzene		< 4.20	ug/Kg		2/18/2016 21:0
Tetrachloroethene		5.29	ug/Kg		2/18/2016 21:04
Toluene		< 4.20	ug/Kg		2/18/2016 21:04
trans-1,2-Dichloroethen	e	< 4.20	ug/Kg		2/18/2016 21:04
trans-1,3-Dichloroprope	ene	< 4.20	ug/Kg		2/18/2016 21:04



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.1

Lab Sample ID:160673-07Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Surrogate	<u>Percent</u>	<u>Recovery</u>	<u>Limits</u>	<u>Outliers</u>	Date Analyz	<u>zed</u>
Vinyl chloride	< 4.20	ug/Kg			2/18/2016	21:04
Trichlorofluoromethane	< 4.20	ug/Kg			2/18/2016	21:04
Trichloroethene	< 4.20	ug/Kg			2/18/2016	21:04

Surrogate	Percent Recovery	<u>Limits</u>	<u>outhers</u>	Date Analy	<u>zeu</u>
1,2-Dichloroethane-d4	106	83 - 126		2/18/2016	21:04
4-Bromofluorobenzene	92.7	80.8 - 115		2/18/2016	21:04
Pentafluorobenzene	95.6	90.6 - 111		2/18/2016	21:04
Toluene-D8	96.1	89.2 - 109		2/18/2016	21:04

**Method Reference(s):** EPA 8260C

EPA 5035

**Data File:** x29711.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.2

 Lab Sample ID:
 160673-08
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<u>Qualifier</u>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.39	ug/Kg		2/18/2016 21:28
1,1,2,2-Tetrachloroethane	< 4.39	ug/Kg		2/18/2016 21:28
1,1,2-Trichloroethane	< 4.39	ug/Kg		2/18/2016 21:28
1,1-Dichloroethane	< 4.39	ug/Kg		2/18/2016 21:28
1,1-Dichloroethene	< 4.39	ug/Kg		2/18/2016 21:28
1,2,3-Trichlorobenzene	< 11.0	ug/Kg		2/18/2016 21:28
1,2,4-Trichlorobenzene	< 11.0	ug/Kg		2/18/2016 21:28
1,2,4-Trimethylbenzene	< 4.39	ug/Kg		2/18/2016 21:28
1,2-Dibromo-3-Chloropropane	< 22.0	ug/Kg		2/18/2016 21:28
1,2-Dibromoethane	< 4.39	ug/Kg		2/18/2016 21:28
1,2-Dichlorobenzene	< 4.39	ug/Kg		2/18/2016 21:28
1,2-Dichloroethane	< 4.39	ug/Kg		2/18/2016 21:28
1,2-Dichloropropane	< 4.39	ug/Kg		2/18/2016 21:28
1,3,5-Trimethylbenzene	< 4.39	ug/Kg		2/18/2016 21:28
1,3-Dichlorobenzene	< 4.39	ug/Kg		2/18/2016 21:28
1,4-Dichlorobenzene	< 4.39	ug/Kg		2/18/2016 21:28
1,4-dioxane	< 43.9	ug/Kg		2/18/2016 21:28
2-Butanone	< 22.0	ug/Kg		2/18/2016 21:28
2-Hexanone	< 11.0	ug/Kg		2/18/2016 21:28
4-Methyl-2-pentanone	< 11.0	ug/Kg		2/18/2016 21:28
Acetone	< 22.0	ug/Kg		2/18/2016 21:28
Benzene	< 4.39	ug/Kg		2/18/2016 21:28
Bromochloromethane	< 11.0	ug/Kg		2/18/2016 21:28
Bromodichloromethane	< 4.39	ug/Kg		2/18/2016 21:28
Bromoform	< 11.0	ug/Kg		2/18/2016 21:28
Bromomethane	< 4.39	ug/Kg		2/18/2016 21:28
Carbon disulfide	< 4.39	ug/Kg		2/18/2016 21:28



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject keierence:	1440 Empire B	orvu			
Sample Identifier:	R-3.2				
Lab Sample ID:	160673-08			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
Carbon Tetrachloride		< 4.39	ug/Kg		2/18/2016 21:
Chlorobenzene		< 4.39	ug/Kg		2/18/2016 21:
Chloroethane		< 4.39	ug/Kg		2/18/2016 21
Chloroform		< 4.39	ug/Kg		2/18/2016 21
Chloromethane		< 4.39	ug/Kg		2/18/2016 21
cis-1,2-Dichloroethene		< 4.39	ug/Kg		2/18/2016 21
cis-1,3-Dichloropropene		< 4.39	ug/Kg		2/18/2016 21
Cyclohexane		< 22.0	ug/Kg		2/18/2016 21
Dibromochloromethane		< 4.39	ug/Kg		2/18/2016 21
Dichlorodifluoromethan	e	< 4.39	ug/Kg		2/18/2016 21
Ethylbenzene		< 4.39	ug/Kg		2/18/2016 21
Freon 113		< 4.39	ug/Kg		2/18/2016 21
Isopropylbenzene		< 4.39	ug/Kg		2/18/2016 21
m,p-Xylene		< 4.39	ug/Kg		2/18/2016 21
Methyl acetate		< 4.39	ug/Kg		2/18/2016 21
Methyl tert-butyl Ether		< 4.39	ug/Kg		2/18/2016 21
Methylcyclohexane		< 4.39	ug/Kg		2/18/2016 21
Methylene chloride		< 11.0	ug/Kg		2/18/2016 21
Naphthalene		< 11.0	ug/Kg		2/18/2016 21
n-Butylbenzene		< 4.39	ug/Kg		2/18/2016 21
n-Propylbenzene		< 4.39	ug/Kg		2/18/2016 21
o-Xylene		< 4.39	ug/Kg		2/18/2016 21
p-Isopropyltoluene		< 4.39	ug/Kg		2/18/2016 21
sec-Butylbenzene		< 4.39	ug/Kg		2/18/2016 21
Styrene		< 11.0	ug/Kg		2/18/2016 21
tert-Butylbenzene		< 4.39	ug/Kg		2/18/2016 21
Tetrachloroethene		2.32	ug/Kg	J	2/18/2016 21
Toluene		< 4.39	ug/Kg		2/18/2016 21
trans-1,2-Dichloroethene	e	< 4.39	ug/Kg		2/18/2016 21
trans-1,3-Dichloroprope	ne	< 4.39	ug/Kg		2/18/2016 21
			-		



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.2

Lab Sample ID:160673-08Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

1 2-Dichloroethane-d4		107	83 - 126		2/18/2016	21.28
<u>Surrogate</u>	<u>Perce</u> i	nt Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>vzed</u>
Vinyl chloride	< 4.39	ug/Kg			2/18/2016	5 21:28
Trichlorofluoromethane	< 4.39	ug/Kg			2/18/2016	5 21:28
Trichloroethene	< 4.39	ug/Kg			2/18/2016	5 21:28

1,2-Dichloroethane-d4	107	83 - 126	2/18/2016	21:28
4-Bromofluorobenzene	94.3	80.8 - 115	2/18/2016	21:28
Pentafluorobenzene	96.1	90.6 - 111	2/18/2016	21:28
Toluene-D8	94.4	89.2 - 109	2/18/2016	21:28

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29712.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.3

Lab Sample ID:160673-09Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

## **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	Qualifier	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.63	ug/Kg		2/18/2016 21:52
1,1,2,2-Tetrachloroethane	< 4.63	ug/Kg		2/18/2016 21:52
1,1,2-Trichloroethane	< 4.63	ug/Kg		2/18/2016 21:52
1,1-Dichloroethane	< 4.63	ug/Kg		2/18/2016 21:52
1,1-Dichloroethene	< 4.63	ug/Kg		2/18/2016 21:52
1,2,3-Trichlorobenzene	< 11.6	ug/Kg		2/18/2016 21:52
1,2,4-Trichlorobenzene	< 11.6	ug/Kg		2/18/2016 21:52
1,2,4-Trimethylbenzene	< 4.63	ug/Kg		2/18/2016 21:52
1,2-Dibromo-3-Chloropropane	< 23.1	ug/Kg		2/18/2016 21:52
1,2-Dibromoethane	< 4.63	ug/Kg		2/18/2016 21:52
1,2-Dichlorobenzene	< 4.63	ug/Kg		2/18/2016 21:52
1,2-Dichloroethane	< 4.63	ug/Kg		2/18/2016 21:52
1,2-Dichloropropane	< 4.63	ug/Kg		2/18/2016 21:52
1,3,5-Trimethylbenzene	< 4.63	ug/Kg		2/18/2016 21:52
1,3-Dichlorobenzene	< 4.63	ug/Kg		2/18/2016 21:52
1,4-Dichlorobenzene	< 4.63	ug/Kg		2/18/2016 21:52
1,4-dioxane	< 46.3	ug/Kg		2/18/2016 21:52
2-Butanone	< 23.1	ug/Kg		2/18/2016 21:52
2-Hexanone	< 11.6	ug/Kg		2/18/2016 21:52
4-Methyl-2-pentanone	< 11.6	ug/Kg		2/18/2016 21:52
Acetone	< 23.1	ug/Kg		2/18/2016 21:52
Benzene	< 4.63	ug/Kg		2/18/2016 21:52
Bromochloromethane	< 11.6	ug/Kg		2/18/2016 21:52
Bromodichloromethane	< 4.63	ug/Kg		2/18/2016 21:52
Bromoform	< 11.6	ug/Kg		2/18/2016 21:52
Bromomethane	< 4.63	ug/Kg		2/18/2016 21:52
Carbon disulfide	< 4.63	ug/Kg		2/18/2016 21:52



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	R-3.3				
Lab Sample ID:	160673-09			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
Carbon Tetrachloride		< 4.63	ug/Kg		2/18/2016 21
Chlorobenzene		< 4.63	ug/Kg		2/18/2016 21
Chloroethane		< 4.63	ug/Kg		2/18/2016 21
Chloroform		< 4.63	ug/Kg		2/18/2016 21
Chloromethane		< 4.63	ug/Kg		2/18/2016 21
cis-1,2-Dichloroethene		< 4.63	ug/Kg		2/18/2016 21
cis-1,3-Dichloropropene	2	< 4.63	ug/Kg		2/18/2016 21
Cyclohexane		< 23.1	ug/Kg		2/18/2016 21
Dibromochloromethane	<b>!</b>	< 4.63	ug/Kg		2/18/2016 21
Dichlorodifluoromethan	ne	< 4.63	ug/Kg		2/18/2016 21
Ethylbenzene		< 4.63	ug/Kg		2/18/2016 21
Freon 113		< 4.63	ug/Kg		2/18/2016 21
Isopropylbenzene		< 4.63	ug/Kg		2/18/2016 21
m,p-Xylene		< 4.63	ug/Kg		2/18/2016 21
Methyl acetate		< 4.63	ug/Kg		2/18/2016 21
Methyl tert-butyl Ether		< 4.63	ug/Kg		2/18/2016 21
Methylcyclohexane		< 4.63	ug/Kg		2/18/2016 21
Methylene chloride		< 11.6	ug/Kg		2/18/2016 21
Naphthalene		< 11.6	ug/Kg		2/18/2016 21
n-Butylbenzene		< 4.63	ug/Kg		2/18/2016 21
n-Propylbenzene		< 4.63	ug/Kg		2/18/2016 21
o-Xylene		< 4.63	ug/Kg		2/18/2016 21
p-Isopropyltoluene		< 4.63	ug/Kg		2/18/2016 21
sec-Butylbenzene		< 4.63	ug/Kg		2/18/2016 21
Styrene		< 11.6	ug/Kg		2/18/2016 21
tert-Butylbenzene		< 4.63	ug/Kg		2/18/2016 21
Tetrachloroethene		6.54	ug/Kg		2/18/2016 21
Toluene		< 4.63	ug/Kg		2/18/2016 21
trans-1,2-Dichloroethen	ie	< 4.63	ug/Kg		2/18/2016 21
trans-1,3-Dichloroprope	ene	< 4.63	ug/Kg		2/18/2016 21



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.3

Lab Sample ID:160673-09Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Surrogate	<u>Percent</u>	Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analy	<u>zed</u>
Vinyl chloride	< 4.63	ug/Kg			2/18/2016	21:52
Trichlorofluoromethane	< 4.63	ug/Kg			2/18/2016	21:52
Trichloroethene	< 4.63	ug/Kg			2/18/2016	21:52

<del>= = -      </del>				
1,2-Dichloroethane-d4	105	83 - 126	2/18/2016	21:52
4-Bromofluorobenzene	89.7	80.8 - 115	2/18/2016	21:52
Pentafluorobenzene	94.3	90.6 - 111	2/18/2016	21:52
Toluene-D8	93.7	89.2 - 109	2/18/2016	21:52

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29713.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.4

Lab Sample ID:160673-10Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

# **Volatile Organics**

Analyte	<u>Result</u>	<u>Units</u>	Qualifier	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 4.10	ug/Kg		2/18/2016 22:17
1,1,2,2-Tetrachloroethane	< 4.10	ug/Kg		2/18/2016 22:17
1,1,2-Trichloroethane	< 4.10	ug/Kg		2/18/2016 22:17
1,1-Dichloroethane	< 4.10	ug/Kg		2/18/2016 22:17
1,1-Dichloroethene	< 4.10	ug/Kg		2/18/2016 22:17
1,2,3-Trichlorobenzene	< 10.2	ug/Kg		2/18/2016 22:17
1,2,4-Trichlorobenzene	< 10.2	ug/Kg		2/18/2016 22:17
1,2,4-Trimethylbenzene	< 4.10	ug/Kg		2/18/2016 22:17
1,2-Dibromo-3-Chloropropane	< 20.5	ug/Kg		2/18/2016 22:17
1,2-Dibromoethane	< 4.10	ug/Kg		2/18/2016 22:17
1,2-Dichlorobenzene	< 4.10	ug/Kg		2/18/2016 22:17
1,2-Dichloroethane	< 4.10	ug/Kg		2/18/2016 22:17
1,2-Dichloropropane	< 4.10	ug/Kg		2/18/2016 22:17
1,3,5-Trimethylbenzene	< 4.10	ug/Kg		2/18/2016 22:17
1,3-Dichlorobenzene	< 4.10	ug/Kg		2/18/2016 22:17
1,4-Dichlorobenzene	< 4.10	ug/Kg		2/18/2016 22:17
1,4-dioxane	< 41.0	ug/Kg		2/18/2016 22:17
2-Butanone	< 20.5	ug/Kg		2/18/2016 22:17
2-Hexanone	< 10.2	ug/Kg		2/18/2016 22:17
4-Methyl-2-pentanone	< 10.2	ug/Kg		2/18/2016 22:17
Acetone	< 20.5	ug/Kg		2/18/2016 22:17
Benzene	< 4.10	ug/Kg		2/18/2016 22:17
Bromochloromethane	< 10.2	ug/Kg		2/18/2016 22:17
Bromodichloromethane	< 4.10	ug/Kg		2/18/2016 22:17
Bromoform	< 10.2	ug/Kg		2/18/2016 22:17
Bromomethane	< 4.10	ug/Kg		2/18/2016 22:17
Carbon disulfide	< 4.10	ug/Kg		2/18/2016 22:17



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	R-3.4					
ab Sample ID:	160673-10			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 4.10	ug/Kg		2/18/2016	22:1
Chlorobenzene		< 4.10	ug/Kg		2/18/2016	22:1
Chloroethane		< 4.10	ug/Kg		2/18/2016	22:
Chloroform		< 4.10	ug/Kg		2/18/2016	22:
Chloromethane		< 4.10	ug/Kg		2/18/2016	22:
cis-1,2-Dichloroethene		< 4.10	ug/Kg		2/18/2016	22:
cis-1,3-Dichloropropen	e	< 4.10	ug/Kg		2/18/2016	22:
Cyclohexane		< 20.5	ug/Kg		2/18/2016	22:
Dibromochloromethan	e	< 4.10	ug/Kg		2/18/2016	22:
Dichlorodifluorometha	ne	< 4.10	ug/Kg		2/18/2016	22:
Ethylbenzene		< 4.10	ug/Kg		2/18/2016	22:
Freon 113		< 4.10	ug/Kg		2/18/2016	22
Isopropylbenzene		< 4.10	ug/Kg		2/18/2016	22
m,p-Xylene		< 4.10	ug/Kg		2/18/2016	22
Methyl acetate		< 4.10	ug/Kg		2/18/2016	22
Methyl tert-butyl Ether		< 4.10	ug/Kg		2/18/2016	22
Methylcyclohexane		< 4.10	ug/Kg		2/18/2016	22
Methylene chloride		< 10.2	ug/Kg		2/18/2016	22
Naphthalene		< 10.2	ug/Kg		2/18/2016	22
n-Butylbenzene		< 4.10	ug/Kg		2/18/2016	22
n-Propylbenzene		< 4.10	ug/Kg		2/18/2016	22
o-Xylene		< 4.10	ug/Kg		2/18/2016	22:
p-Isopropyltoluene		< 4.10	ug/Kg		2/18/2016	22:
sec-Butylbenzene		< 4.10	ug/Kg		2/18/2016	22:
Styrene		< 10.2	ug/Kg		2/18/2016	22:
tert-Butylbenzene		< 4.10	ug/Kg		2/18/2016	22:
Tetrachloroethene		6.24	ug/Kg		2/18/2016	22:
Toluene		< 4.10	ug/Kg		2/18/2016	22:
trans-1,2-Dichloroethe	ne	< 4.10	ug/Kg		2/18/2016	22:
trans-1,3-Dichloroprop	ene	< 4.10	ug/Kg		2/18/2016	22:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.4

 Lab Sample ID:
 160673-10
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

Surrogate	<u>Percen</u>	t Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analyzed</b>
Vinyl chloride	< 4.10	ug/Kg			2/18/2016 22:17
Trichlorofluoromethane	< 4.10	ug/Kg			2/18/2016 22:17
Trichloroethene	< 4.10	ug/Kg			2/18/2016 22:17

			 ,	
1,2-Dichloroethane-d4	109	83 - 126	2/18/2016	22:17
4-Bromofluorobenzene	89.8	80.8 - 115	2/18/2016	22:17
Pentafluorobenzene	94.7	90.6 - 111	2/18/2016	22:17
Toluene-D8	94.6	89.2 - 109	2/18/2016	22:17

**Method Reference(s):** EPA 8260C

EPA 5035

**Data File:** x29714.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.5

 Lab Sample ID:
 160673-11
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **Volatile Organics**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 4.48	ug/Kg		2/18/2016 22:40
1,1,2,2-Tetrachloroethane	< 4.48	ug/Kg		2/18/2016 22:40
1,1,2-Trichloroethane	< 4.48	ug/Kg		2/18/2016 22:40
1,1-Dichloroethane	< 4.48	ug/Kg		2/18/2016 22:40
1,1-Dichloroethene	< 4.48	ug/Kg		2/18/2016 22:40
1,2,3-Trichlorobenzene	< 11.2	ug/Kg		2/18/2016 22:40
1,2,4-Trichlorobenzene	< 11.2	ug/Kg		2/18/2016 22:40
1,2,4-Trimethylbenzene	< 4.48	ug/Kg		2/18/2016 22:40
1,2-Dibromo-3-Chloropropane	< 22.4	ug/Kg		2/18/2016 22:40
1,2-Dibromoethane	< 4.48	ug/Kg		2/18/2016 22:40
1,2-Dichlorobenzene	< 4.48	ug/Kg		2/18/2016 22:40
1,2-Dichloroethane	< 4.48	ug/Kg		2/18/2016 22:40
1,2-Dichloropropane	< 4.48	ug/Kg		2/18/2016 22:40
1,3,5-Trimethylbenzene	< 4.48	ug/Kg		2/18/2016 22:40
1,3-Dichlorobenzene	< 4.48	ug/Kg		2/18/2016 22:40
1,4-Dichlorobenzene	< 4.48	ug/Kg		2/18/2016 22:40
1,4-dioxane	< 44.8	ug/Kg		2/18/2016 22:40
2-Butanone	< 22.4	ug/Kg		2/18/2016 22:40
2-Hexanone	< 11.2	ug/Kg		2/18/2016 22:40
4-Methyl-2-pentanone	< 11.2	ug/Kg		2/18/2016 22:40
Acetone	< 22.4	ug/Kg		2/18/2016 22:40
Benzene	< 4.48	ug/Kg		2/18/2016 22:40
Bromochloromethane	< 11.2	ug/Kg		2/18/2016 22:40
Bromodichloromethane	< 4.48	ug/Kg		2/18/2016 22:40
Bromoform	< 11.2	ug/Kg		2/18/2016 22:40
Bromomethane	< 4.48	ug/Kg		2/18/2016 22:40
Carbon disulfide	< 4.48	ug/Kg		2/18/2016 22:40



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	R-3.5					
ab Sample ID:	160673-11			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 4.48	ug/Kg		2/18/2016 22	2:4
Chlorobenzene		< 4.48	ug/Kg		2/18/2016 22	2:4
Chloroethane		< 4.48	ug/Kg		2/18/2016 22	2:4
Chloroform		< 4.48	ug/Kg		2/18/2016 22	2:4
Chloromethane		< 4.48	ug/Kg		2/18/2016 22	2:4
cis-1,2-Dichloroethene		< 4.48	ug/Kg		2/18/2016 22	2:4
cis-1,3-Dichloropropene	2	< 4.48	ug/Kg		2/18/2016 22	2:4
Cyclohexane		< 22.4	ug/Kg		2/18/2016 22	2:4
Dibromochloromethane	<b>!</b>	< 4.48	ug/Kg		2/18/2016 22	2:4
Dichlorodifluoromethar	ne	< 4.48	ug/Kg		2/18/2016 22	2:4
Ethylbenzene		< 4.48	ug/Kg		2/18/2016 22	2:
Freon 113		< 4.48	ug/Kg		2/18/2016 22	2:
Isopropylbenzene		< 4.48	ug/Kg		2/18/2016 22	2:
m,p-Xylene		< 4.48	ug/Kg		2/18/2016 22	2:
Methyl acetate		< 4.48	ug/Kg		2/18/2016 22	2:
Methyl tert-butyl Ether		< 4.48	ug/Kg		2/18/2016 22	2:
Methylcyclohexane		< 4.48	ug/Kg		2/18/2016 22	2:
Methylene chloride		< 11.2	ug/Kg		2/18/2016 22	2:
Naphthalene		< 11.2	ug/Kg		2/18/2016 22	2:
n-Butylbenzene		< 4.48	ug/Kg		2/18/2016 22	2:
n-Propylbenzene		< 4.48	ug/Kg		2/18/2016 22	2:
o-Xylene		< 4.48	ug/Kg		2/18/2016 22	2:
p-Isopropyltoluene		< 4.48	ug/Kg		2/18/2016 22	2:
sec-Butylbenzene		< 4.48	ug/Kg		2/18/2016 22	2:
Styrene		< 11.2	ug/Kg		2/18/2016 22	2:
tert-Butylbenzene		< 4.48	ug/Kg		2/18/2016 22	2:
Tetrachloroethene		7.58	ug/Kg		2/18/2016 22	2:
Toluene		< 4.48	ug/Kg		2/18/2016 22	2:
trans-1,2-Dichloroether	ie	< 4.48	ug/Kg		2/18/2016 22	2:
trans-1,3-Dichloroprope	ene	< 4.48	ug/Kg		2/18/2016 22	2:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.5

Lab Sample ID:160673-11Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

 Trichloroethene
 < 4.48</td>
 ug/Kg
 2/18/2016
 22:40

 Trichlorofluoromethane
 < 4.48</td>
 ug/Kg
 2/18/2016
 22:40

 Vinyl chloride
 < 4.48</td>
 ug/Kg
 2/18/2016
 22:40

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<u>Date Analy</u>	<u>vzed</u>
1,2-Dichloroethane-d4	109	83 - 126		2/18/2016	22:40
4-Bromofluorobenzene	93.3	80.8 - 115		2/18/2016	22:40
Pentafluorobenzene	94.9	90.6 - 111		2/18/2016	22:40
Toluene-D8	93.8	89.2 - 109		2/18/2016	22:40

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29715.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.6

 Lab Sample ID:
 160673-12
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

# **Volatile Organics**

Analyte	Result	<u>Units</u>	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 3.11	ug/Kg		2/18/2016 23:05
1,1,2,2-Tetrachloroethane	< 3.11	ug/Kg		2/18/2016 23:05
1,1,2-Trichloroethane	< 3.11	ug/Kg		2/18/2016 23:05
1,1-Dichloroethane	< 3.11	ug/Kg		2/18/2016 23:05
1,1-Dichloroethene	< 3.11	ug/Kg		2/18/2016 23:05
1,2,3-Trichlorobenzene	< 7.78	ug/Kg		2/18/2016 23:05
1,2,4-Trichlorobenzene	< 7.78	ug/Kg		2/18/2016 23:05
1,2,4-Trimethylbenzene	< 3.11	ug/Kg		2/18/2016 23:05
1,2-Dibromo-3-Chloropropane	< 15.6	ug/Kg		2/18/2016 23:05
1,2-Dibromoethane	< 3.11	ug/Kg		2/18/2016 23:05
1,2-Dichlorobenzene	< 3.11	ug/Kg		2/18/2016 23:05
1,2-Dichloroethane	< 3.11	ug/Kg		2/18/2016 23:05
1,2-Dichloropropane	< 3.11	ug/Kg		2/18/2016 23:05
1,3,5-Trimethylbenzene	< 3.11	ug/Kg		2/18/2016 23:05
1,3-Dichlorobenzene	< 3.11	ug/Kg		2/18/2016 23:05
1,4-Dichlorobenzene	< 3.11	ug/Kg		2/18/2016 23:05
1,4-dioxane	< 31.1	ug/Kg		2/18/2016 23:05
2-Butanone	< 15.6	ug/Kg		2/18/2016 23:05
2-Hexanone	< 7.78	ug/Kg		2/18/2016 23:05
4-Methyl-2-pentanone	< 7.78	ug/Kg		2/18/2016 23:05
Acetone	< 15.6	ug/Kg		2/18/2016 23:05
Benzene	< 3.11	ug/Kg		2/18/2016 23:05
Bromochloromethane	< 7.78	ug/Kg		2/18/2016 23:05
Bromodichloromethane	< 3.11	ug/Kg		2/18/2016 23:05
Bromoform	< 7.78	ug/Kg		2/18/2016 23:05
Bromomethane	< 3.11	ug/Kg		2/18/2016 23:05
Carbon disulfide	< 3.11	ug/Kg		2/18/2016 23:05



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	R-3.6					
Lab Sample ID:	160673-12			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
Carbon Tetrachloride		< 3.11	ug/Kg		2/18/2016 23	3:0
Chlorobenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
Chloroethane		< 3.11	ug/Kg		2/18/2016 23	3:0
Chloroform		< 3.11	ug/Kg		2/18/2016 23	3:0
Chloromethane		< 3.11	ug/Kg		2/18/2016 23	3:0
cis-1,2-Dichloroethene	2	< 3.11	ug/Kg		2/18/2016 23	3:0
cis-1,3-Dichloroproper	ne	< 3.11	ug/Kg		2/18/2016 23	3:0
Cyclohexane		< 15.6	ug/Kg		2/18/2016 23	3:0
Dibromochloromethan	ne	< 3.11	ug/Kg		2/18/2016 23	3:0
Dichlorodifluorometha	ane	< 3.11	ug/Kg		2/18/2016 23	3:0
Ethylbenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
Freon 113		< 3.11	ug/Kg		2/18/2016 23	3:0
Isopropylbenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
m,p-Xylene		< 3.11	ug/Kg		2/18/2016 23	3:0
Methyl acetate		< 3.11	ug/Kg		2/18/2016 23	3:0
Methyl tert-butyl Ethe	r	< 3.11	ug/Kg		2/18/2016 23	3:0
Methylcyclohexane		< 3.11	ug/Kg		2/18/2016 23	3:0
Methylene chloride		< 7.78	ug/Kg		2/18/2016 23	3:0
Naphthalene		< 7.78	ug/Kg		2/18/2016 23	3:0
n-Butylbenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
n-Propylbenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
o-Xylene		< 3.11	ug/Kg		2/18/2016 23	3:0
p-Isopropyltoluene		< 3.11	ug/Kg		2/18/2016 23	3:0
sec-Butylbenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
Styrene		< 7.78	ug/Kg		2/18/2016 23	3:0
tert-Butylbenzene		< 3.11	ug/Kg		2/18/2016 23	3:0
Tetrachloroethene		2.09	ug/Kg	J	2/18/2016 23	3:0
Toluene		< 3.11	ug/Kg		2/18/2016 23	3:0
trans-1,2-Dichloroethe	ene	< 3.11	ug/Kg		2/18/2016 23	3:0
trans-1,3-Dichloropro	pene	< 3.11	ug/Kg		2/18/2016 23	3:0



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-3.6

Lab Sample ID:160673-12Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Surrogate	Percent J	Recovery	<u>Limits</u>	<u>Outliers</u>	Date Analyz	<u>zed</u>
Vinyl chloride	< 3.11	ug/Kg			2/18/2016	23:05
Trichlorofluoromethane	< 3.11	ug/Kg			2/18/2016	23:05
Trichloroethene	< 3.11	ug/Kg			2/18/2016	23:05

	<del></del>		 	
1,2-Dichloroethane-d4	108	83 - 126	2/18/2016	23:05
4-Bromofluorobenzene	99.9	80.8 - 115	2/18/2016	23:05
Pentafluorobenzene	96.2	90.6 - 111	2/18/2016	23:05
Toluene-D8	94.3	89.2 - 109	2/18/2016	23:05

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29716.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-6.1

Lab Sample ID:160673-13Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

## **Volatile Organics**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1,1-Trichloroethane	< 3.98	ug/Kg		2/18/2016 23:29
1,1,2,2-Tetrachloroethane	< 3.98	ug/Kg		2/18/2016 23:29
1,1,2-Trichloroethane	< 3.98	ug/Kg		2/18/2016 23:29
1,1-Dichloroethane	< 3.98	ug/Kg		2/18/2016 23:29
1,1-Dichloroethene	< 3.98	ug/Kg		2/18/2016 23:29
1,2,3-Trichlorobenzene	< 9.94	ug/Kg		2/18/2016 23:29
1,2,4-Trichlorobenzene	< 9.94	ug/Kg		2/18/2016 23:29
1,2,4-Trimethylbenzene	< 3.98	ug/Kg		2/18/2016 23:29
1,2-Dibromo-3-Chloropropane	< 19.9	ug/Kg		2/18/2016 23:29
1,2-Dibromoethane	< 3.98	ug/Kg		2/18/2016 23:29
1,2-Dichlorobenzene	< 3.98	ug/Kg		2/18/2016 23:29
1,2-Dichloroethane	< 3.98	ug/Kg		2/18/2016 23:29
1,2-Dichloropropane	< 3.98	ug/Kg		2/18/2016 23:29
1,3,5-Trimethylbenzene	< 3.98	ug/Kg		2/18/2016 23:29
1,3-Dichlorobenzene	< 3.98	ug/Kg		2/18/2016 23:29
1,4-Dichlorobenzene	< 3.98	ug/Kg		2/18/2016 23:29
1,4-dioxane	< 39.8	ug/Kg		2/18/2016 23:29
2-Butanone	< 19.9	ug/Kg		2/18/2016 23:29
2-Hexanone	< 9.94	ug/Kg		2/18/2016 23:29
4-Methyl-2-pentanone	< 9.94	ug/Kg		2/18/2016 23:29
Acetone	< 19.9	ug/Kg		2/18/2016 23:29
Benzene	< 3.98	ug/Kg		2/18/2016 23:29
Bromochloromethane	< 9.94	ug/Kg		2/18/2016 23:29
Bromodichloromethane	< 3.98	ug/Kg		2/18/2016 23:29
Bromoform	< 9.94	ug/Kg		2/18/2016 23:29
Bromomethane	< 3.98	ug/Kg		2/18/2016 23:29
Carbon disulfide	< 3.98	ug/Kg		2/18/2016 23:29



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	R-6.1				
Lab Sample ID:	160673-13			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
Carbon Tetrachloride		< 3.98	ug/Kg		2/18/2016 23:2
Chlorobenzene		< 3.98	ug/Kg		2/18/2016 23:2
Chloroethane		< 3.98	ug/Kg		2/18/2016 23:2
Chloroform		< 3.98	ug/Kg		2/18/2016 23:2
Chloromethane		< 3.98	ug/Kg		2/18/2016 23:2
cis-1,2-Dichloroethene		< 3.98	ug/Kg		2/18/2016 23:2
cis-1,3-Dichloropropene		< 3.98	ug/Kg		2/18/2016 23:2
Cyclohexane		< 19.9	ug/Kg		2/18/2016 23:2
Dibromochloromethane		< 3.98	ug/Kg		2/18/2016 23:2
Dichlorodifluoromethane	e	< 3.98	ug/Kg		2/18/2016 23:2
Ethylbenzene		< 3.98	ug/Kg		2/18/2016 23:2
Freon 113		< 3.98	ug/Kg		2/18/2016 23:2
Isopropylbenzene		< 3.98	ug/Kg		2/18/2016 23:2
m,p-Xylene		< 3.98	ug/Kg		2/18/2016 23:2
Methyl acetate		< 3.98	ug/Kg		2/18/2016 23:2
Methyl tert-butyl Ether		< 3.98	ug/Kg		2/18/2016 23:2
Methylcyclohexane		< 3.98	ug/Kg		2/18/2016 23:2
Methylene chloride		< 9.94	ug/Kg		2/18/2016 23:2
Naphthalene		< 9.94	ug/Kg		2/18/2016 23:2
n-Butylbenzene		< 3.98	ug/Kg		2/18/2016 23:2
n-Propylbenzene		< 3.98	ug/Kg		2/18/2016 23:2
o-Xylene		< 3.98	ug/Kg		2/18/2016 23:2
p-Isopropyltoluene		37.1	ug/Kg		2/18/2016 23:2
sec-Butylbenzene		< 3.98	ug/Kg		2/18/2016 23:2
Styrene		< 9.94	ug/Kg		2/18/2016 23:2
tert-Butylbenzene		< 3.98	ug/Kg		2/18/2016 23:2
Tetrachloroethene		3.75	ug/Kg	J	2/18/2016 23:2
Toluene		< 3.98	ug/Kg		2/18/2016 23:2
trans-1,2-Dichloroethene	e	< 3.98	ug/Kg		2/18/2016 23:2
trans-1,3-Dichloroprope	ne	< 3.98	ug/Kg		2/18/2016 23:2



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** R-6.1

Lab Sample ID:160673-13Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

Trichloroethene	< 3.98	ug/Kg	2/18/2016 23:29
Trichlorofluoromethane	< 3.98	ug/Kg	2/18/2016 23:29
Vinyl chloride	< 3.98	ug/Kg	2/18/2016 23:29

<u>Surrogate</u>	Percent Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	<u>zed</u>
1,2-Dichloroethane-d4	103	83 - 126		2/18/2016	23:29
4-Bromofluorobenzene	98.1	80.8 - 115		2/18/2016	23:29
Pentafluorobenzene	95.4	90.6 - 111		2/18/2016	23:29
Toluene-D8	93.6	89.2 - 109		2/18/2016	23:29

**Method Reference(s):** EPA 8260C

EPA 5035

Data File: x29717.D

This sample was not collected following SW846 5035A specifications. Accordingly, any Volatiles soil results that are less than 200 ug/Kg, including Non Detects, may be biased low, per ELAP method 5035 guidance document from 11/15/2012.



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #1(R1.1,R1.2,R1.3)

Lab Sample ID:160673-14Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

#### **Metals**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	6.97	mg/Kg		2/19/2016 14:23
Barium	50.8	mg/Kg		2/19/2016 14:23
Beryllium	0.330	mg/Kg		2/19/2016 14:23
Cadmium	1.35	mg/Kg		2/19/2016 14:23
Chromium	18.9	mg/Kg		2/19/2016 14:23
Copper	30.6	mg/Kg		2/19/2016 14:23
Lead	74.7	mg/Kg		2/19/2016 14:23
Manganese	379	mg/Kg		2/19/2016 14:23
Nickel	14.5	mg/Kg		2/19/2016 14:23
Selenium	1.00	mg/Kg		2/19/2016 14:23
Silver	0.405	mg/Kg	J	2/19/2016 14:23
Zinc	207	mg/Kg		2/19/2016 14:23

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 2/17/2016 Data File: 021916b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #1(R1.1,R1.2,R1.3)

Lab Sample ID:160673-14Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Mercury** 

Analyte Result Units Qualifier Date Analyzed

Mercury 0.0710 mg/Kg 2/19/2016 12:30

Method Reference(s):EPA 7471BPreparation Date:2/18/2016Data File:Hg160219A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #1(R1.1,R1.2,R1.3)

Lab Sample ID:160673-14Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

#### **PCBs**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
PCB-1016	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1221	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1232	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1242	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1248	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1254	1.94	mg/Kg			2/24/2016	17:22
PCB-1260	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1262	< 0.168	mg/Kg			2/24/2016	17:22
PCB-1268	< 0.168	mg/Kg			2/24/2016	17:22
<u>Surrogate</u>	<u>Percent</u>	Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>zed</u>
Decachlorobiphenyl	1	90	17.6 - 142	*	2/24/2016	17:22
Tetrachloro-m-xylene	1	22	0 - 152		2/24/2016	17:22

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 2/23/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #1(R1.1,R1.2,R1.3)

Lab Sample ID:160673-14Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

# Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1-Biphenyl	< 336	ug/Kg		2/22/2016 17:19
1,2,4,5-Tetrachlorobenzene	< 336	ug/Kg		2/22/2016 17:19
1,2,4-Trichlorobenzene	< 336	ug/Kg		2/22/2016 17:19
1,2-Dichlorobenzene	< 336	ug/Kg		2/22/2016 17:19
1,3-Dichlorobenzene	< 336	ug/Kg		2/22/2016 17:19
1,4-Dichlorobenzene	< 336	ug/Kg		2/22/2016 17:19
2,3,4,6-Tetrachlorophenol	< 336	ug/Kg		2/22/2016 17:19
2,4,5-Trichlorophenol	< 671	ug/Kg		2/22/2016 17:19
2,4,6-Trichlorophenol	< 336	ug/Kg		2/22/2016 17:19
2,4-Dichlorophenol	< 336	ug/Kg		2/22/2016 17:19
2,4-Dimethylphenol	< 336	ug/Kg		2/22/2016 17:19
2,4-Dinitrophenol	< 671	ug/Kg		2/22/2016 17:19
2,4-Dinitrotoluene	< 336	ug/Kg		2/22/2016 17:19
2,6-Dinitrotoluene	< 336	ug/Kg		2/22/2016 17:19
2-Chloronaphthalene	< 336	ug/Kg		2/22/2016 17:19
2-Chlorophenol	< 336	ug/Kg		2/22/2016 17:19
2-Methylnapthalene	< 336	ug/Kg		2/22/2016 17:19
2-Methylphenol	< 336	ug/Kg		2/22/2016 17:19
2-Nitroaniline	< 671	ug/Kg		2/22/2016 17:19
2-Nitrophenol	< 336	ug/Kg		2/22/2016 17:19
3&4-Methylphenol	< 336	ug/Kg		2/22/2016 17:19
3,3'-Dichlorobenzidine	< 336	ug/Kg		2/22/2016 17:19
3-Nitroaniline	< 671	ug/Kg		2/22/2016 17:19
4,6-Dinitro-2-methylphenol	< 671	ug/Kg		2/22/2016 17:19
4-Bromophenyl phenyl ether	< 336	ug/Kg		2/22/2016 17:19
4-Chloro-3-methylphenol	< 336	ug/Kg		2/22/2016 17:19
4-Chloroaniline	< 336	ug/Kg		2/22/2016 17:19



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

	T 1 TO Empir					
Sample Identifier:	•	#1(R1.1,R1.2	2,R1.3)			
Lab Sample ID:	160673-14			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
4-Chlorophenyl phenyl	ether	< 336	ug/Kg		2/22/2016 1	17:1
4-Nitroaniline		< 671	ug/Kg		2/22/2016 1	17:1
4-Nitrophenol		< 671	ug/Kg		2/22/2016 1	17:1
Acenaphthene		< 336	ug/Kg		2/22/2016 1	17:1
Acenaphthylene		< 336	ug/Kg		2/22/2016 1	17:1
Acetophenone		< 336	ug/Kg		2/22/2016 1	17:1
Anthracene		< 336	ug/Kg		2/22/2016 1	17:1
Atrazine		< 336	ug/Kg		2/22/2016 1	17:
Benzaldehyde		< 336	ug/Kg		2/22/2016 1	17:
Benzo (a) anthracene		1020	ug/Kg		2/22/2016 1	17:
Benzo (a) pyrene		1500	ug/Kg		2/22/2016 1	17:
Benzo (b) fluoranthene	)	1920	ug/Kg		2/22/2016 1	17:
Benzo (g,h,i) perylene		1490	ug/Kg		2/22/2016 1	17:
Benzo (k) fluoranthene	)	1190	ug/Kg		2/22/2016 1	17:
Bis (2-chloroethoxy) m	ethane	< 336	ug/Kg		2/22/2016 1	17:
Bis (2-chloroethyl) eth	er	< 336	ug/Kg		2/22/2016 1	17:
Bis (2-chloroisopropyl	) ether	< 336	ug/Kg		2/22/2016 1	17:
Bis (2-ethylhexyl) phth	alate	< 336	ug/Kg		2/22/2016 1	17:
Butylbenzylphthalate		< 336	ug/Kg		2/22/2016 1	17:
Caprolactam		< 336	ug/Kg		2/22/2016 1	17:
Carbazole		< 336	ug/Kg		2/22/2016 1	17:
Chrysene		1340	ug/Kg		2/22/2016 1	17:
Dibenz (a,h) anthracen	e	379	ug/Kg		2/22/2016 1	17:
Dibenzofuran		< 336	ug/Kg		2/22/2016 1	17:1
Diethyl phthalate		< 336	ug/Kg		2/22/2016 1	17:1
Dimethyl phthalate		< 671	ug/Kg		2/22/2016 1	17:
Di-n-butyl phthalate		< 336	ug/Kg		2/22/2016 1	17:
Di-n-octylphthalate		< 336	ug/Kg		2/22/2016 1	17:
Fluoranthene		1300	ug/Kg		2/22/2016 1	17:
Fluorene		< 336	ug/Kg		2/22/2016 1	17:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	Composite #1	(R1.1,R1	.2,R1.3)				
Lab Sample ID:	160673-14			Da	te Sampled:	2/12/2016	
Matrix:	Soil			Da	te Received:	2/12/2016	
Hexachlorobenzene		< 336	ug/Kg			2/22/2016	17:19
Hexachlorobutadiene		< 336	ug/Kg			2/22/2016	17:19
Hexachlorocyclopentadiene		< 336	ug/Kg			2/22/2016	17:19
Hexachloroethane		< 336	ug/Kg			2/22/2016	17:19
Indeno (1,2,3-cd) pyrene		1690	ug/Kg			2/22/2016	17:19
Isophorone		< 336	ug/Kg			2/22/2016	17:19
Naphthalene		< 336	ug/Kg			2/22/2016	17:19
Nitrobenzene		< 336	ug/Kg			2/22/2016	17:19
N-Nitroso-di-n-propylar	mine	< 336	ug/Kg			2/22/2016	17:19
N-Nitrosodiphenylamin	e	< 336	ug/Kg			2/22/2016	17:19
Pentachlorophenol		< 671	ug/Kg			2/22/2016	17:19
Phenanthrene		513	ug/Kg			2/22/2016	17:19
Phenol		< 336	ug/Kg			2/22/2016	17:19
Pyrene		1290	ug/Kg			2/22/2016	17:19
Surrogate		Per	cent Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analyzed</b>	
2,4,6-Tribromophenol			74.3	36.2 - 107		2/22/2016	17:19
2-Fluorobiphenyl			55.5	22 - 96.1		2/22/2016	17:19
2-Fluorophenol			45.3	14.2 - 89.8		2/22/2016	17:19
Nitrobenzene-d5			43.7	11.6 - 83.3		2/22/2016	17:19

50.7

**75.1** 

19.4 - 102

60.4 - 114

2/22/2016

2/22/2016

17:19

17:19

Method Reference(s): EPA 8270D

Phenol-d5

Terphenyl-d14

EPA 3550C

 Preparation Date:
 2/22/2016

 Data File:
 B10291.D



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #1(R1.1,R1.2,R1.3)

Lab Sample ID:160673-14Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Total Cyanide** 

Analyte Result Units Qualifier Date Analyzed

Cyanide, Total **1.34** mg/Kg 2/24/2016

Method Reference(s):EPA 9014Preparation Date:2/24/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #2(R2.1,R2.2,R2.3)

 Lab Sample ID:
 160673-15
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

#### **Metals**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	2.84	mg/Kg		2/19/2016 14:28
Barium	40.9	mg/Kg		2/19/2016 14:28
Beryllium	0.306	mg/Kg		2/19/2016 14:28
Cadmium	0.976	mg/Kg		2/19/2016 14:28
Chromium	14.3	mg/Kg		2/19/2016 14:28
Copper	46.9	mg/Kg		2/19/2016 14:28
Lead	139	mg/Kg		2/19/2016 14:28
Manganese	223	mg/Kg		2/19/2016 14:28
Nickel	15.8	mg/Kg		2/19/2016 14:28
Selenium	0.773	mg/Kg		2/19/2016 14:28
Silver	0.374	mg/Kg	J	2/19/2016 14:28
Zinc	199	mg/Kg		2/19/2016 14:28

Method Reference(s): EPA 6010C

EPA 3050B

**Preparation Date:** 2/17/2016 **Data File:** 021916b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #2(R2.1,R2.2,R2.3)

Lab Sample ID:160673-15Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

<u>Mercury</u>

AnalyteResultUnitsQualifierDate AnalyzedMercury0.442mg/Kg2/19/2016 12:33

Method Reference(s):EPA 7471BPreparation Date:2/18/2016Data File:Hg160219A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #2(R2.1,R2.2,R2.3)

 Lab Sample ID:
 160673-15
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

#### **PCBs**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
PCB-1016	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1221	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1232	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1242	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1248	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1254	0.461	mg/Kg			2/24/2016	17:45
PCB-1260	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1262	< 0.0342	mg/Kg			2/24/2016	17:45
PCB-1268	< 0.0342	mg/Kg			2/24/2016	17:45
<u>Surrogate</u>	<b>Percent Recovery</b>		<u>Limits</u>	<b>Outliers</b>	<b>Date Analyzed</b>	
Decachlorobiphenyl	1	39	17.6 - 142		2/24/2016	17:45
Tetrachloro-m-xylene	93	3.9	0 - 152		2/24/2016	17:45

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 2/23/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #2(R2.1,R2.2,R2.3)

Lab Sample ID:160673-15Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

# Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1-Biphenyl	< 345	ug/Kg		2/22/2016 17:48
1,2,4,5-Tetrachlorobenzene	< 345	ug/Kg		2/22/2016 17:48
1,2,4-Trichlorobenzene	< 345	ug/Kg		2/22/2016 17:48
1,2-Dichlorobenzene	< 345	ug/Kg		2/22/2016 17:48
1,3-Dichlorobenzene	< 345	ug/Kg		2/22/2016 17:48
1,4-Dichlorobenzene	< 345	ug/Kg		2/22/2016 17:48
2,3,4,6-Tetrachlorophenol	< 345	ug/Kg		2/22/2016 17:48
2,4,5-Trichlorophenol	< 691	ug/Kg		2/22/2016 17:48
2,4,6-Trichlorophenol	< 345	ug/Kg		2/22/2016 17:48
2,4-Dichlorophenol	< 345	ug/Kg		2/22/2016 17:48
2,4-Dimethylphenol	< 345	ug/Kg		2/22/2016 17:48
2,4-Dinitrophenol	< 691	ug/Kg		2/22/2016 17:48
2,4-Dinitrotoluene	< 345	ug/Kg		2/22/2016 17:48
2,6-Dinitrotoluene	< 345	ug/Kg		2/22/2016 17:48
2-Chloronaphthalene	< 345	ug/Kg		2/22/2016 17:48
2-Chlorophenol	< 345	ug/Kg		2/22/2016 17:48
2-Methylnapthalene	< 345	ug/Kg		2/22/2016 17:48
2-Methylphenol	< 345	ug/Kg		2/22/2016 17:48
2-Nitroaniline	< 691	ug/Kg		2/22/2016 17:48
2-Nitrophenol	< 345	ug/Kg		2/22/2016 17:48
3&4-Methylphenol	< 345	ug/Kg		2/22/2016 17:48
3,3'-Dichlorobenzidine	< 345	ug/Kg		2/22/2016 17:48
3-Nitroaniline	< 691	ug/Kg		2/22/2016 17:48
4,6-Dinitro-2-methylphenol	< 691	ug/Kg		2/22/2016 17:48
4-Bromophenyl phenyl ether	< 345	ug/Kg		2/22/2016 17:48
4-Chloro-3-methylphenol	< 345	ug/Kg		2/22/2016 17:48
4-Chloroaniline	< 345	ug/Kg		2/22/2016 17:48



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	•	#2(R2.1,R2.2	2,R2.3)			
Lab Sample ID:	160673-15			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
4-Chlorophenyl phen	yl ether	< 345	ug/Kg		2/22/2016	17:48
4-Nitroaniline		< 691	ug/Kg		2/22/2016	17:48
4-Nitrophenol		< 691	ug/Kg		2/22/2016	17:48
Acenaphthene		< 345	ug/Kg		2/22/2016	17:48
Acenaphthylene		< 345	ug/Kg		2/22/2016	17:48
Acetophenone		< 345	ug/Kg		2/22/2016	17:48
Anthracene		< 345	ug/Kg		2/22/2016	17:48
Atrazine		< 345	ug/Kg		2/22/2016	17:48
Benzaldehyde		< 345	ug/Kg		2/22/2016	17:48
Benzo (a) anthracene		529	ug/Kg		2/22/2016	17:48
Benzo (a) pyrene		548	ug/Kg		2/22/2016	17:48
Benzo (b) fluoranther	ne	526	ug/Kg		2/22/2016	17:48
Benzo (g,h,i) perylene	9	399	ug/Kg		2/22/2016	17:48
Benzo (k) fluoranther	ne	467	ug/Kg		2/22/2016	17:48
Bis (2-chloroethoxy)	methane	< 345	ug/Kg		2/22/2016	17:48
Bis (2-chloroethyl) et	her	< 345	ug/Kg		2/22/2016	17:48
Bis (2-chloroisopropy	ıl) ether	< 345	ug/Kg		2/22/2016	17:48
Bis (2-ethylhexyl) ph	thalate	< 345	ug/Kg		2/22/2016	17:48
Butylbenzylphthalate	•	< 345	ug/Kg		2/22/2016	17:48
Caprolactam		< 345	ug/Kg		2/22/2016	17:48
Carbazole		< 345	ug/Kg		2/22/2016	17:48
Chrysene		565	ug/Kg		2/22/2016	17:48
Dibenz (a,h) anthrace	ene	< 345	ug/Kg		2/22/2016	17:48
Dibenzofuran		< 345	ug/Kg		2/22/2016	17:48
Diethyl phthalate		< 345	ug/Kg		2/22/2016	17:48
Dimethyl phthalate		< 691	ug/Kg		2/22/2016	17:48
Di-n-butyl phthalate		< 345	ug/Kg		2/22/2016	17:48
Di-n-octylphthalate		< 345	ug/Kg		2/22/2016	17:48
Fluoranthene		1060	ug/Kg		2/22/2016	17:48
Fluorene		< 345	ug/Kg		2/22/2016	17:48



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	Composite #2	(R2.1,R2.	2,R2.3)				
Lab Sample ID:	160673-15			Da	ite Sampled:	2/12/2016	
Matrix:	Soil			Da	ite Received:	2/12/2016	
Hexachlorobenzene		< 345	ug/Kg			2/22/2016	17:48
Hexachlorobutadiene		< 345	ug/Kg			2/22/2016	17:48
Hexachlorocyclopentad	iene	< 345	ug/Kg			2/22/2016	17:48
Hexachloroethane		< 345	ug/Kg			2/22/2016	17:48
Indeno (1,2,3-cd) pyren	e	472	ug/Kg			2/22/2016	17:48
Isophorone		< 345	ug/Kg			2/22/2016	17:48
Naphthalene		< 345	ug/Kg			2/22/2016	17:48
Nitrobenzene		< 345	ug/Kg			2/22/2016	17:48
N-Nitroso-di-n-propylar	nine	< 345	ug/Kg			2/22/2016	17:48
N-Nitrosodiphenylamin	e	< 345	ug/Kg			2/22/2016	17:48
Pentachlorophenol		< 691	ug/Kg			2/22/2016	17:48
Phenanthrene		579	ug/Kg			2/22/2016	17:48
Phenol		< 345	ug/Kg			2/22/2016	17:48
Pyrene		892	ug/Kg			2/22/2016	17:48
<b>Surrogate</b>		Perce	ent Recovery	<b>Limits</b>	<u>Outliers</u>	<b>Date Analyz</b>	zed
2,4,6-Tribromophenol			66.9	36.2 - 107		2/22/2016	17:48
2-Fluorobiphenyl			55.6	22 - 96.1		2/22/2016	17:48
2-Fluorophenol			48.8	14.2 - 89.8		2/22/2016	17:48

46.7

52.7

68.7

11.6 - 83.3

19.4 - 102

60.4 - 114

2/22/2016

2/22/2016

2/22/2016

17:48

17:48

17:48

Method Reference(s): EPA 8270D

Nitrobenzene-d5

Terphenyl-d14

Phenol-d5

EPA 3550C

Preparation Date: 2/22/2016

Data File: B10292.D



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #2(R2.1,R2.2,R2.3)

Lab Sample ID:160673-15Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Total Cyanide** 

<u>Analyte</u> <u>Result Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Cyanide, Total < 0.457 mg/Kg 2/24/2016

Method Reference(s):EPA 9014Preparation Date:2/24/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #3(R3.1,R3.2,R3.3)

 Lab Sample ID:
 160673-16
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

### **Metals**

Analyte	<b>Result</b>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	2.88	mg/Kg		2/19/2016 14:32
Barium	58.7	mg/Kg		2/19/2016 14:32
Beryllium	0.292	mg/Kg		2/19/2016 14:32
Cadmium	1.83	mg/Kg		2/19/2016 14:32
Chromium	103	mg/Kg		2/19/2016 14:32
Copper	51.2	mg/Kg		2/19/2016 14:32
Lead	87.6	mg/Kg		2/19/2016 14:32
Manganese	289	mg/Kg		2/19/2016 14:32
Nickel	60.4	mg/Kg		2/19/2016 14:32
Selenium	0.969	mg/Kg		2/19/2016 14:32
Silver	0.582	mg/Kg		2/19/2016 14:32
Zinc	172	mg/Kg		2/19/2016 14:32

Method Reference(s): EPA 6010C

EPA 3050B

**Preparation Date:** 2/17/2016 **Data File:** 021916b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #3(R3.1,R3.2,R3.3)

Lab Sample ID:160673-16Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

<u>Mercury</u>

AnalyteResultUnitsQualifierDate AnalyzedMercury0.207mg/Kg2/19/201612:36

Method Reference(s):EPA 7471BPreparation Date:2/18/2016Data File:Hg160219A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #3(R3.1,R3.2,R3.3)

 Lab Sample ID:
 160673-16
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

### **PCBs**

<u>Result</u>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	zed
< 0.674	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
3.37	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
< 0.674	mg/Kg			2/24/2016	18:08
<u>Percent</u>	Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	<u>zed</u>
N	NC .	17.6 - 142		2/24/2016	18:08
N	NC .	0 - 152		2/24/2016	18:08
	< 0.674 < 0.674 < 0.674 < 0.674 < 0.674 3.37 < 0.674 < 0.674	< 0.674 mg/Kg	< 0.674 mg/Kg  3.37 mg/Kg < 0.674 mg/Kg < 0.674 mg/Kg < 0.674 mg/Kg < 0.674 mg/Kg	< 0.674 mg/Kg  3.37 mg/Kg < 0.674 mg/Kg < 0.674 mg/Kg < 0.674 mg/Kg < 0.674 mg/Kg	< 0.674

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 2/23/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #3(R3.1,R3.2,R3.3)

Lab Sample ID:160673-16Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

# Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1-Biphenyl	< 340	ug/Kg		2/22/2016 18:17
1,2,4,5-Tetrachlorobenzene	< 340	ug/Kg		2/22/2016 18:17
1,2,4-Trichlorobenzene	< 340	ug/Kg		2/22/2016 18:17
1,2-Dichlorobenzene	< 340	ug/Kg		2/22/2016 18:17
1,3-Dichlorobenzene	< 340	ug/Kg		2/22/2016 18:17
1,4-Dichlorobenzene	< 340	ug/Kg		2/22/2016 18:17
2,3,4,6-Tetrachlorophenol	< 340	ug/Kg		2/22/2016 18:17
2,4,5-Trichlorophenol	< 680	ug/Kg		2/22/2016 18:17
2,4,6-Trichlorophenol	< 340	ug/Kg		2/22/2016 18:17
2,4-Dichlorophenol	< 340	ug/Kg		2/22/2016 18:17
2,4-Dimethylphenol	< 340	ug/Kg		2/22/2016 18:17
2,4-Dinitrophenol	< 680	ug/Kg		2/22/2016 18:17
2,4-Dinitrotoluene	< 340	ug/Kg		2/22/2016 18:17
2,6-Dinitrotoluene	< 340	ug/Kg		2/22/2016 18:17
2-Chloronaphthalene	< 340	ug/Kg		2/22/2016 18:17
2-Chlorophenol	< 340	ug/Kg		2/22/2016 18:17
2-Methylnapthalene	< 340	ug/Kg		2/22/2016 18:17
2-Methylphenol	< 340	ug/Kg		2/22/2016 18:17
2-Nitroaniline	< 680	ug/Kg		2/22/2016 18:17
2-Nitrophenol	< 340	ug/Kg		2/22/2016 18:17
3&4-Methylphenol	< 340	ug/Kg		2/22/2016 18:17
3,3'-Dichlorobenzidine	< 340	ug/Kg		2/22/2016 18:17
3-Nitroaniline	< 680	ug/Kg		2/22/2016 18:17
4,6-Dinitro-2-methylphenol	< 680	ug/Kg		2/22/2016 18:17
4-Bromophenyl phenyl ether	< 340	ug/Kg		2/22/2016 18:17
4-Chloro-3-methylphenol	< 340	ug/Kg		2/22/2016 18:17
4-Chloroaniline	< 340	ug/Kg		2/22/2016 18:17



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

roject keierence:	1440 Empire E	oivu			
Sample Identifier:	Composite #3	3(R3.1,R3.2	2,R3.3)		
Lab Sample ID:	160673-16			Date Sampled:	2/12/2016
Matrix:	Soil			Date Received:	2/12/2016
4-Chlorophenyl pheny	d ether	< 340	ug/Kg		2/22/2016 18:
4-Nitroaniline		< 680	ug/Kg		2/22/2016 18:
4-Nitrophenol		< 680	ug/Kg		2/22/2016 18:
Acenaphthene		< 340	ug/Kg		2/22/2016 18:
Acenaphthylene		< 340	ug/Kg		2/22/2016 18:
Acetophenone		< 340	ug/Kg		2/22/2016 18:
Anthracene		< 340	ug/Kg		2/22/2016 18:
Atrazine		< 340	ug/Kg		2/22/2016 18:
Benzaldehyde		< 340	ug/Kg		2/22/2016 18:
Benzo (a) anthracene		380	ug/Kg		2/22/2016 18:
Benzo (a) pyrene		357	ug/Kg		2/22/2016 18:
Benzo (b) fluoranthen	e	347	ug/Kg		2/22/2016 18:
Benzo (g,h,i) perylene		264	ug/Kg	J	2/22/2016 18:
Benzo (k) fluoranthen	e	338	ug/Kg	J	2/22/2016 18:
Bis (2-chloroethoxy) r	nethane	< 340	ug/Kg		2/22/2016 18:
Bis (2-chloroethyl) eth	ner	< 340	ug/Kg		2/22/2016 18:
Bis (2-chloroisopropy	l) ether	< 340	ug/Kg		2/22/2016 18:
Bis (2-ethylhexyl) pht	halate	< 340	ug/Kg		2/22/2016 18:
Butylbenzylphthalate		< 340	ug/Kg		2/22/2016 18:
Caprolactam		< 340	ug/Kg		2/22/2016 18:
Carbazole		< 340	ug/Kg		2/22/2016 18:
Chrysene		425	ug/Kg		2/22/2016 18:
Dibenz (a,h) anthracei	ne	< 340	ug/Kg		2/22/2016 18:
Dibenzofuran		< 340	ug/Kg		2/22/2016 18:
Diethyl phthalate		< 340	ug/Kg		2/22/2016 18:
Dimethyl phthalate		< 680	ug/Kg		2/22/2016 18:
Di-n-butyl phthalate		< 340	ug/Kg		2/22/2016 18:3
Di-n-octylphthalate		< 340	ug/Kg		2/22/2016 18:3
Fluoranthene		827	ug/Kg		2/22/2016 18:3
Fluorene		< 340	ug/Kg		2/22/2016 18:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	Composite #3	R3.1,R3.	2,R3.3)				
Lab Sample ID:	160673-16	, -	, ,	Date	e Sampled:	2/12/2016	
Matrix:	Soil			Date	e Received:	2/12/2016	
Hexachlorobenzene		< 340	ug/Kg			2/22/2016	18:17
Hexachlorobutadiene		< 340	ug/Kg			2/22/2016	18:17
Hexachlorocyclopentad	iene	< 340	ug/Kg			2/22/2016	18:17
Hexachloroethane		< 340	ug/Kg			2/22/2016	18:17
Indeno (1,2,3-cd) pyren	ie	313	ug/Kg		J	2/22/2016	18:17
Isophorone		< 340	ug/Kg			2/22/2016	18:17
Naphthalene		< 340	ug/Kg			2/22/2016	18:17
Nitrobenzene		< 340	ug/Kg			2/22/2016	18:17
N-Nitroso-di-n-propyla	mine	< 340	ug/Kg			2/22/2016	18:17
N-Nitrosodiphenylamin	ie	< 340	ug/Kg			2/22/2016	18:17
Pentachlorophenol		< 680	ug/Kg			2/22/2016	18:17
Phenanthrene		489	ug/Kg			2/22/2016	18:17
Phenol		< 340	ug/Kg			2/22/2016	18:17
Pyrene		679	ug/Kg			2/22/2016	18:17
Surrogate		Perc	ent Recovery	<u>Limits</u>	<b>Outliers</b>	Date Analyz	zed
2,4,6-Tribromophenol			69.8	36.2 - 107		2/22/2016	18:17
2-Fluorobiphenyl			60.1	22 - 96.1		2/22/2016	18:17
2-Fluorophenol			47.2	14.2 - 89.8		2/22/2016	18:17
Nitrobenzene-d5			47.9	11.6 - 83.3		2/22/2016	18:17
Phenol-d5			54.3	19.4 - 102		2/22/2016	18:17

Method Reference(s): EPA 8270D

Terphenyl-d14

EPA 3550C

 Preparation Date:
 2/22/2016

 Data File:
 B10293.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

72.3

60.4 - 114

2/22/2016

18:17



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #3(R3.1,R3.2,R3.3)

Lab Sample ID:160673-16Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Total Cyanide** 

Analyte Result Units Qualifier Date Analyzed

Cyanide, Total < 0.597 mg/Kg 2/24/2016

Method Reference(s):EPA 9014Preparation Date:2/24/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #4(R3.4,R3.5,R3.6)

Lab Sample ID:160673-17Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

## **Metals**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	3.96	mg/Kg		2/19/2016 14:36
Barium	46.7	mg/Kg		2/19/2016 14:36
Beryllium	0.318	mg/Kg		2/19/2016 14:36
Cadmium	1.89	mg/Kg		2/19/2016 14:36
Chromium	17.4	mg/Kg		2/19/2016 14:36
Copper	65.4	mg/Kg		2/19/2016 14:36
Lead	128	mg/Kg		2/19/2016 14:36
Manganese	302	mg/Kg		2/19/2016 14:36
Nickel	16.4	mg/Kg		2/19/2016 14:36
Selenium	1.44	mg/Kg		2/19/2016 14:36
Silver	0.527	mg/Kg	J	2/19/2016 14:36
Zinc	219	mg/Kg		2/19/2016 14:36

Method Reference(s): EPA 6010C

EPA 3050B

**Preparation Date:** 2/17/2016 **Data File:** 021916b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #4(R3.4,R3.5,R3.6)

Lab Sample ID:160673-17Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

<u>Mercury</u>

AnalyteResultUnitsQualifierDate AnalyzedMercury0.142mg/Kg2/19/2016 12:40

Method Reference(s):EPA 7471BPreparation Date:2/18/2016Data File:Hg160219A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #4(R3.4,R3.5,R3.6)

 Lab Sample ID:
 160673-17
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **PCBs**

<u>Analyte</u>	<b>Result</b>	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
PCB-1016	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1221	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1232	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1242	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1248	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1254	0.872	mg/Kg			2/24/2016	18:30
PCB-1260	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1262	< 0.178	mg/Kg			2/24/2016	18:30
PCB-1268	< 0.178	mg/Kg			2/24/2016	18:30
<u>Surrogate</u>	<u>Percent</u>	Recovery	<u>Limits</u>	<u>Outliers</u>	<b>Date Analy</b>	<u>zed</u>
Decachlorobiphenyl	4	65	17.6 - 142	*	2/24/2016	18:30
Tetrachloro-m-xylene	1	12	0 - 152		2/24/2016	18:30

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 2/23/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #4(R3.4,R3.5,R3.6)

Lab Sample ID:160673-17Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

# Semi-Volatile Organics (Acid/Base Neutrals)

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	Date Analyzed
1,1-Biphenyl	< 357	ug/Kg		2/22/2016 18:46
1,2,4,5-Tetrachlorobenzene	< 357	ug/Kg		2/22/2016 18:46
1,2,4-Trichlorobenzene	< 357	ug/Kg		2/22/2016 18:46
1,2-Dichlorobenzene	< 357	ug/Kg		2/22/2016 18:46
1,3-Dichlorobenzene	< 357	ug/Kg		2/22/2016 18:46
1,4-Dichlorobenzene	< 357	ug/Kg		2/22/2016 18:46
2,3,4,6-Tetrachlorophenol	< 357	ug/Kg		2/22/2016 18:46
2,4,5-Trichlorophenol	< 714	ug/Kg		2/22/2016 18:46
2,4,6-Trichlorophenol	< 357	ug/Kg		2/22/2016 18:46
2,4-Dichlorophenol	< 357	ug/Kg		2/22/2016 18:46
2,4-Dimethylphenol	< 357	ug/Kg		2/22/2016 18:46
2,4-Dinitrophenol	< 714	ug/Kg		2/22/2016 18:46
2,4-Dinitrotoluene	< 357	ug/Kg		2/22/2016 18:46
2,6-Dinitrotoluene	< 357	ug/Kg		2/22/2016 18:46
2-Chloronaphthalene	< 357	ug/Kg		2/22/2016 18:46
2-Chlorophenol	< 357	ug/Kg		2/22/2016 18:46
2-Methylnapthalene	< 357	ug/Kg		2/22/2016 18:46
2-Methylphenol	< 357	ug/Kg		2/22/2016 18:46
2-Nitroaniline	< 714	ug/Kg		2/22/2016 18:46
2-Nitrophenol	< 357	ug/Kg		2/22/2016 18:46
3&4-Methylphenol	< 357	ug/Kg		2/22/2016 18:46
3,3'-Dichlorobenzidine	< 357	ug/Kg		2/22/2016 18:46
3-Nitroaniline	< 714	ug/Kg		2/22/2016 18:46
4,6-Dinitro-2-methylphenol	< 714	ug/Kg		2/22/2016 18:46
4-Bromophenyl phenyl ether	< 357	ug/Kg		2/22/2016 18:46
4-Chloro-3-methylphenol	< 357	ug/Kg		2/22/2016 18:46
4-Chloroaniline	< 357	ug/Kg		2/22/2016 18:46



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Toject Reference:	1440 Empire i	DIVU				
Sample Identifier:	Composite #	4(R3.4,R3.5	5,R3.6)			
Lab Sample ID:	160673-17			Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
4-Chlorophenyl pheny	l ether	< 357	ug/Kg		2/22/2016 1	18:4
4-Nitroaniline		< 714	ug/Kg		2/22/2016 1	18:4
4-Nitrophenol		< 714	ug/Kg		2/22/2016 1	18:4
Acenaphthene		< 357	ug/Kg		2/22/2016 1	18:4
Acenaphthylene		< 357	ug/Kg		2/22/2016 1	18:4
Acetophenone		< 357	ug/Kg		2/22/2016 1	18:4
Anthracene		< 357	ug/Kg		2/22/2016 1	18:4
Atrazine		< 357	ug/Kg		2/22/2016 1	18:4
Benzaldehyde		< 357	ug/Kg		2/22/2016 1	18:4
Benzo (a) anthracene		465	ug/Kg		2/22/2016 1	18:4
Benzo (a) pyrene		430	ug/Kg		2/22/2016 1	18:4
Benzo (b) fluoranthen	e	464	ug/Kg		2/22/2016 1	18:4
Benzo (g,h,i) perylene		327	ug/Kg	J	2/22/2016 1	18:4
Benzo (k) fluoranthen	e	387	ug/Kg		2/22/2016 1	18:4
Bis (2-chloroethoxy) n	nethane	< 357	ug/Kg		2/22/2016 1	18:4
Bis (2-chloroethyl) eth	ner	< 357	ug/Kg		2/22/2016 1	18:4
Bis (2-chloroisopropy	l) ether	< 357	ug/Kg		2/22/2016 1	18:4
Bis (2-ethylhexyl) pht	halate	< 357	ug/Kg		2/22/2016 1	18:4
Butylbenzylphthalate		< 357	ug/Kg		2/22/2016 1	18:4
Caprolactam		< 357	ug/Kg		2/22/2016 1	18:4
Carbazole		< 357	ug/Kg		2/22/2016 1	18:4
Chrysene		492	ug/Kg		2/22/2016 1	18:4
Dibenz (a,h) anthracer	ne	< 357	ug/Kg		2/22/2016 1	18:4
Dibenzofuran		< 357	ug/Kg		2/22/2016 1	18:4
Diethyl phthalate		< 357	ug/Kg		2/22/2016 1	18:4
Dimethyl phthalate		< 714	ug/Kg		2/22/2016 1	18:4
Di-n-butyl phthalate		< 357	ug/Kg		2/22/2016 1	18:4
Di-n-octylphthalate		< 357	ug/Kg		2/22/2016 1	18:4
Fluoranthene		918	ug/Kg		2/22/2016 1	18:4
Fluorene		< 357	ug/Kg		2/22/2016 1	18:4



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	Composite #4	(R3.4,R3	.5,R3.6)				
Lab Sample ID:	160673-17			Dat	e Sampled:	2/12/2016	
Matrix:	Soil			Dat	e Received:	2/12/2016	
Hexachlorobenzene		< 357	ug/Kg			2/22/2016	18:46
Hexachlorobutadiene		< 357	ug/Kg			2/22/2016	18:46
Hexachlorocyclopentad	iene	< 357	ug/Kg			2/22/2016	18:46
Hexachloroethane		< 357	ug/Kg			2/22/2016	18:46
Indeno (1,2,3-cd) pyren	e	423	ug/Kg			2/22/2016	18:46
Isophorone		< 357	ug/Kg			2/22/2016	18:46
Naphthalene		< 357	ug/Kg			2/22/2016	18:46
Nitrobenzene		< 357	ug/Kg			2/22/2016	18:46
N-Nitroso-di-n-propyla	nine	< 357	ug/Kg			2/22/2016	18:46
N-Nitrosodiphenylamin	e	< 357	ug/Kg			2/22/2016	18:46
Pentachlorophenol		< 714	ug/Kg			2/22/2016	18:46
Phenanthrene		436	ug/Kg			2/22/2016	18:46
Phenol		< 357	ug/Kg			2/22/2016	18:46
Pyrene		817	ug/Kg			2/22/2016	18:46
<b>Surrogate</b>		Pero	cent Recovery	<b>Limits</b>	<u>Outliers</u>	Date Analyz	zed
2,4,6-Tribromophenol			71.3	36.2 - 107		2/22/2016	18:46
2-Fluorobiphenyl			58.3	22 - 96.1		2/22/2016	18:46
2-Fluorophenol			53.5	14.2 - 89.8		2/22/2016	18:46
Nitrobenzene-d5			53.4	11.6 - 83.3		2/22/2016	18:46

56.3

72.0

19.4 - 102

60.4 - 114

2/22/2016

2/22/2016

18:46

18:46

Method Reference(s): EPA 8270D

Phenol-d5

Terphenyl-d14

EPA 3550C

Preparation Date: 2/22/2016

Data File: B10294.D



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #4(R3.4,R3.5,R3.6)

Lab Sample ID:160673-17Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Total Cyanide** 

<u>Analyte</u> <u>Result</u> <u>Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Cyanide, Total < 0.421 mg/Kg 2/24/2016

Method Reference(s):EPA 9014Preparation Date:2/24/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #5(R6.1,R6.2,R6.3)

 Lab Sample ID:
 160673-18
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

## **Metals**

<u>Analyte</u>	Result	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
Arsenic	3.16	mg/Kg		2/19/2016 14:41
Barium	96.5	mg/Kg		2/19/2016 14:41
Beryllium	0.274	mg/Kg		2/19/2016 14:41
Cadmium	4.04	mg/Kg		2/19/2016 14:41
Chromium	36.7	mg/Kg		2/19/2016 14:41
Copper	59.4	mg/Kg	D	2/19/2016 14:41
Lead	195	mg/Kg	M	2/19/2016 14:41
Manganese	326	mg/Kg	M	2/19/2016 14:41
Nickel	17.5	mg/Kg		2/19/2016 14:41
Selenium	0.518	mg/Kg	J	2/19/2016 14:41
Silver	0.693	mg/Kg		2/19/2016 14:41
Zinc	290	mg/Kg	DM	2/19/2016 14:41

Method Reference(s): EPA 6010C

EPA 3050B

Preparation Date: 2/17/2016 Data File: 021916b



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #5(R6.1,R6.2,R6.3)

Lab Sample ID:160673-18Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Mercury** 

AnalyteResultUnitsQualifierDate AnalyzedMercury0.123mg/KgM2/19/201612:43

Method Reference(s):EPA 7471BPreparation Date:2/18/2016Data File:Hg160219A



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #5(R6.1,R6.2,R6.3)

 Lab Sample ID:
 160673-18
 Date Sampled:
 2/12/2016

 Matrix:
 Soil
 Date Received:
 2/12/2016

### **PCBs**

<u>Analyte</u>	Result	<u>Units</u>		<b>Qualifier</b>	<b>Date Analy</b>	<u>zed</u>
PCB-1016	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1221	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1232	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1242	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1248	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1254	0.887	mg/Kg			2/24/2016	18:53
PCB-1260	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1262	< 0.163	mg/Kg			2/24/2016	18:53
PCB-1268	< 0.163	mg/Kg			2/24/2016	18:53
<u>Surrogate</u>	<u>Percent</u>	Recovery	<u>Limits</u>	<b>Outliers</b>	<b>Date Analy</b>	<u>zed</u>
Decachlorobiphenyl	1	86	17.6 - 142	*	2/24/2016	18:53
Tetrachloro-m-xylene	1	11	0 - 152		2/24/2016	18:53

**Method Reference(s):** EPA 8082A

EPA 3550C

**Preparation Date:** 2/23/2016



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #5(R6.1,R6.2,R6.3)

Lab Sample ID:160673-18Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

# Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	<u>Result</u>	<u>Units</u>	<b>Qualifier</b>	<b>Date Analyzed</b>
1,1-Biphenyl	< 324	ug/Kg		2/22/2016 20:12
1,2,4,5-Tetrachlorobenzene	< 324	ug/Kg		2/22/2016 20:12
1,2,4-Trichlorobenzene	< 324	ug/Kg		2/22/2016 20:12
1,2-Dichlorobenzene	< 324	ug/Kg		2/22/2016 20:12
1,3-Dichlorobenzene	< 324	ug/Kg		2/22/2016 20:12
1,4-Dichlorobenzene	< 324	ug/Kg		2/22/2016 20:12
2,3,4,6-Tetrachlorophenol	< 324	ug/Kg		2/22/2016 20:12
2,4,5-Trichlorophenol	< 648	ug/Kg		2/22/2016 20:12
2,4,6-Trichlorophenol	< 324	ug/Kg		2/22/2016 20:12
2,4-Dichlorophenol	< 324	ug/Kg		2/22/2016 20:12
2,4-Dimethylphenol	< 324	ug/Kg		2/22/2016 20:12
2,4-Dinitrophenol	< 648	ug/Kg		2/22/2016 20:12
2,4-Dinitrotoluene	< 324	ug/Kg		2/22/2016 20:12
2,6-Dinitrotoluene	< 324	ug/Kg		2/22/2016 20:12
2-Chloronaphthalene	< 324	ug/Kg		2/22/2016 20:12
2-Chlorophenol	< 324	ug/Kg		2/22/2016 20:12
2-Methylnapthalene	< 324	ug/Kg		2/22/2016 20:12
2-Methylphenol	< 324	ug/Kg		2/22/2016 20:12
2-Nitroaniline	< 648	ug/Kg		2/22/2016 20:12
2-Nitrophenol	< 324	ug/Kg		2/22/2016 20:12
3&4-Methylphenol	< 324	ug/Kg		2/22/2016 20:12
3,3'-Dichlorobenzidine	< 324	ug/Kg		2/22/2016 20:12
3-Nitroaniline	< 648	ug/Kg		2/22/2016 20:12
4,6-Dinitro-2-methylphenol	< 648	ug/Kg		2/22/2016 20:12
4-Bromophenyl phenyl ether	< 324	ug/Kg		2/22/2016 20:12
4-Chloro-3-methylphenol	< 324	ug/Kg		2/22/2016 20:12
4-Chloroaniline	< 324	ug/Kg		2/22/2016 20:12



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	Composite	#5(R6.1,R6.2	2,R6.3)			
Lab Sample ID:	160673-18	3		Date Sampled:	2/12/2016	
Matrix:	Soil			Date Received:	2/12/2016	
4-Chlorophenyl pheny	l ether	< 324	ug/Kg		2/22/2016	20:1
4-Nitroaniline		< 648	ug/Kg		2/22/2016	20:1
4-Nitrophenol		< 648	ug/Kg		2/22/2016	20:1
Acenaphthene		318	ug/Kg	J	2/22/2016	20:
Acenaphthylene		< 324	ug/Kg		2/22/2016	20:
Acetophenone		< 324	ug/Kg		2/22/2016	20:
Anthracene		740	ug/Kg		2/22/2016	20:
Atrazine		< 324	ug/Kg		2/22/2016	20:
Benzaldehyde		< 324	ug/Kg		2/22/2016	20:
Benzo (a) anthracene		1310	ug/Kg		2/22/2016	20:
Benzo (a) pyrene		1230	ug/Kg		2/22/2016	20:
Benzo (b) fluoranthen	e	1570	ug/Kg		2/22/2016	20:
Benzo (g,h,i) perylene		808	ug/Kg		2/22/2016	20:
Benzo (k) fluoranthen	e	852	ug/Kg		2/22/2016	20:
Bis (2-chloroethoxy) n	nethane	< 324	ug/Kg		2/22/2016	20:
Bis (2-chloroethyl) eth	ier	< 324	ug/Kg		2/22/2016	20:
Bis (2-chloroisopropyl	) ether	< 324	ug/Kg		2/22/2016	20:
Bis (2-ethylhexyl) phtl	nalate	< 324	ug/Kg		2/22/2016	20:
Butylbenzylphthalate		< 324	ug/Kg		2/22/2016	20:
Caprolactam		< 324	ug/Kg		2/22/2016	20:
Carbazole		239	ug/Kg	J	2/22/2016	20:
Chrysene		1550	ug/Kg		2/22/2016	20:
Dibenz (a,h) anthracer	ne	294	ug/Kg	J	2/22/2016	20:
Dibenzofuran		281	ug/Kg	J	2/22/2016	20:
Diethyl phthalate		< 324	ug/Kg		2/22/2016	20:
Dimethyl phthalate		< 648	ug/Kg		2/22/2016	20:
Di-n-butyl phthalate		< 324	ug/Kg		2/22/2016	20:
Di-n-octylphthalate		< 324	ug/Kg		2/22/2016	20:
Fluoranthene		3410	ug/Kg		2/22/2016	20:
Fluorene		360	ug/Kg		2/22/2016	20:



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

Sample Identifier:	Composite #5	S(R6 1 R6	5 2 R6 3)				
Lab Sample ID:	160673-18	,(110.1,110	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Da	te Sampled:	2/12/2016	
Matrix:	Soil				te Received:	2/12/2016	
Hexachlorobenzene		< 324	ug/Kg			2/22/2016	20:12
Hexachlorobutadiene		< 324	ug/Kg			2/22/2016	20:12
Hexachlorocyclopentae	diene	< 324	ug/Kg			2/22/2016	20:12
Hexachloroethane		< 324	ug/Kg			2/22/2016	20:12
Indeno (1,2,3-cd) pyre	ne	1140	ug/Kg			2/22/2016	20:12
Isophorone		< 324	ug/Kg			2/22/2016	20:12
Naphthalene		< 324	ug/Kg			2/22/2016	20:12
Nitrobenzene		< 324	ug/Kg			2/22/2016	20:12
N-Nitroso-di-n-propyla	amine	< 324	ug/Kg			2/22/2016	20:12
N-Nitrosodiphenylami	ne	< 324	ug/Kg			2/22/2016	20:12
Pentachlorophenol		< 648	ug/Kg			2/22/2016	20:12
Phenanthrene		3390	ug/Kg			2/22/2016	20:12
Phenol		< 324	ug/Kg			2/22/2016	20:12
Pyrene		2590	ug/Kg			2/22/2016	20:12
<b>Surrogate</b>		Per	cent Recovery	<b>Limits</b>	<b>Outliers</b>	Date Analy	zed
2,4,6-Tribromophenol			73.5	36.2 - 107		2/22/2016	20:12
2-Fluorobiphenyl			53.7	22 - 96.1		2/22/2016	20:12
2-Fluorophenol			45.3	14.2 - 89.8		2/22/2016	20:12
Nitrobenzene-d5			47.1	11.6 - 83.3		2/22/2016	20:12
Phenol-d5			49.4	19.4 - 102		2/22/2016	20:12
Terphenyl-d14			75.8	60.4 - 114		2/22/2016	20:12

Method Reference(s): EPA 8270D

EPA 3550C

 Preparation Date:
 2/22/2016

 Data File:
 B10297.D



Client: Ravi Engineering & Land Surveying, P.C.

**Project Reference:** 1440 Empire Blvd

**Sample Identifier:** Composite #5(R6.1,R6.2,R6.3)

Lab Sample ID:160673-18Date Sampled:2/12/2016Matrix:SoilDate Received:2/12/2016

**Total Cyanide** 

<u>Analyte</u> <u>Result</u> <u>Units</u> <u>Qualifier</u> <u>Date Analyzed</u>

Cyanide, Total < 0.556 mg/Kg 2/24/2016

Method Reference(s):EPA 9014Preparation Date:2/24/2016



# **Analytical Report Appendix**

The reported results relate only to the samples as they have been received by the laboratory.

Each page of this document is part of a multipage report. This document may not be reproduced except in its entirety, without the prior consent of Paradigm Environmental Services, Inc.

All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

- "<" = Analyzed for but not detected at or above the quantitation limit.
- "E" = Result has been estimated, calibration limit exceeded.
- "Z" = See case narrative.
- "D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
- "M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
- "B" = Method blank contained trace levels of analyte. Refer to included method blank report.
- "J" = Result estimated between the quantitation limit and half the quantitation limit.
- "L" = Laboratory Control Sample recovery outside accepted QC limits.
- "P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
- "NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
- "\*" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.
- "(1)" = Indicates data from primary column used for QC calculation.
- $"A" = denotes \ a \ parameter \ for \ which \ ELAP \ does \ not \ offer \ approval \ as \ part \ of \ their \ laboratory \ certification \ program.$
- "F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

# GENERAL TERMS AND CONDITIONS LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written. between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term, or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty.

Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB will use LAB default method for all tests unless specified otherwise on the Work Order.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices.

Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability.

In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to reperform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.

Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any

environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure.

Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling.

Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises. Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on the

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment.

LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure.

LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law.

This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.



# CHAIN OF CUSTODY

John Salvery
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	Category B  Other  Other  Other EDD  Please indicate:  Please indicate:		Turnaround Time  Report Supplements  Availability contingent upon lab approval: additional fees may apply	W R-3.4	× × × × × × × × × × × × × × × × × × ×	2,3	R-2.2	- 1	R-1:2	X RILL	DATE COLLECTED TIME COLLECTED O A SAMPLE IDENTIFIER  I B  I B		Matrix Codes: AQ - Aqueous Liquid	PROJECT REFERENCE ATTN: Lynn ZcAcl	PHONE: 585- (097-207)	CITY: STATE: ZII	
Euspay Seal 11/4, Samples delivered by clear, 60 3/12/16	Received @ Lab By	SampleduBy Date/Time  SampleduBy Date/Time  Date/Time	•	< x	××	×.2	< ×;	X >>	×, ×	S0 1 X	X-RIDE WHOOD  TO RHOSEZ  WRITZ-Y-1200  TEL/CPSI VOA  TEL/CPSI SVOA  PEST  S, IVEX  PEBS  Past 375 retals  CI +6  TEN	dwater WW - Wastewater  REQUESTED ANALYSIS	<b>DW</b> - Drinking Water	ATTN	PHONE:	ZIP: CITY: STATE: Z	
pa cheat 60	1634 PILE	Total Cost:			) #3 0-2.2		(Composite R2:1, R:-2.2		(#) RI.	Composite RI.	VOAS as discible	SL - Sludge PT - Paint CK - Caulk		LZICIARI @ raviengion	Email:	ZIP: Quotation #:	



# CHAIN OF CUSTODY

ADDRESS: MALL  PROJECT REFERENCE  HATTY: Codes: AGAqueous Liquid  WGValer  WGAqueous Liquid  WGStructure  WGStr	1637			n base indicate:		prease morcare:
		2/12/16 Date	Received @ Lab By	Other EDD	Other	Other
ACCOLLECTED TREFERENCE  PROJECT REFERENCE  ATTH:  LYAA ZICARCI  MATTA Codes:  AA - AND - Non-Applicational free may apply;  Bath OC  Category A  NE collected  Report Supplements  Availability contingent upon tab approval; additional free may apply;  Bath OC  Category A  NESSON - SAME BRANCH STATE  AND - Non-Applicational free may apply;  Bath OC  Category A  NESSON - SAME BRANCH STATE  AND - Non-Applicational free may apply;  Report Supplements  NESSON - SAME BRANCH STATE  Availability contingent upon tab approval; additional free may apply;  Report Supplements  NESSON - SAME BRANCH STATE  Availability contingent upon tab approval; additional free may apply;  Report Supplements  NESSON - SAME BRANCH STATE  Availability contingent upon tab approval; additional free may apply;  Report Supplements  NESSON - SAME BRANCH STATE  Availability Contingent upon tab approval; additional free may apply;  Bath OC  Category A  NESSON - SAME BRANCH STATE  AND - Non-Applicational free may apply;  Samplational free may apply;	15:10	DatesTime	Received By	X	Category B	Rush 2 day
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ADDRESS: MALL STATE: 2DP.  PROJECT REFERENCE  PHONE: 535-697-3071  PROJECT REFERENCE  ACT. Acqueous Liquid  NG. Non-Aqueous Li		<u> </u>	pote	Composite #2		7
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ADDRESS:  ATTN:  CYNA Z LCAACI  Matrix Codes: AQ - Aqueous Liquid  MQ - Non-Aqueous Liquid  MQ - Non-Aqueous Liquid  MG - Groundwater  MC - Non-Aqueous Liquid  MG - Groundwater  MC - Non-Aqueous Liquid  MG - Soli WA - 3 - 5  SAMPLE IDENTIFIER  ADDRESS:  ATTN:  CYNA Z LCAACI  ATTN:  ADDRESS:  ATTN:  CYNA Z LCAACI  ATTN:  PHONE:  PW - Drinking Water  SU - Soli WA - Wastewater  SU - Soli WA - WA		*		R-6:1		ω
ADDRESS:  ADDRESS:  ADDRESS:  PROJECT REFERENCE  PROJECT REFERENCE  ATTN:  CYNA Z CARCI  Matrix Codes: AQ. Aqueous Liquid  NQ. Non-Aqueous Liquid  NQ. Non-Aqueous Liquid  NG. Groundwater  NO. Soli  NG. Non-Aqueous Liquid  NG. Groundwater  NG. G	, R3,5.	K.		R-3.6		2
TIME COLLECTED  O  S  S  SAMPLE IDENTIFIER  ADDRESS:  ADDRESS:  ADDRESS:  ADDRESS:  ATTN: CHAN Z CARCI  PHONE:  SSST 697 - 2071  PHONE:  ATTN: CHAN Z CARCI  Matrix Codes: A0 - Aqueous Liquid  NO - Non-Aqueous Liquid  NO -	#2	7	So 1	<b>パージ</b> : 5	×	12/12/11
ADDRESS: ADDRESS:  CITY: STATE: ZIP: CITY: STATE: ZIP: CITY: STATE: ZIP: Q. ATTN:  CAP A Z CARA  AC Aqueous Liquid NG - Groundwater WW - Wastewater SL - Sludge FREQUESTED ANALYSIS  REQUESTED ANALYSIS	REMARKS	TCL/CPSI VOA TCL SVOA Pest	<b>∨moo</b> c 7mmzcz	SAMPLE (DENTIFIER	TIME COLLECTED O S I I I I I I I I I I I I I I I I I I	DATE COLLECTE
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ADDRESS: KAU ADDRESS:  CITY: STATE: ZIP: CITY: STATE: ZIP:    PHONE: 535-697-2071 PHONE:    PHONE: 41TN: Cynn 210AC1	SD - Solid PT - Paint		WA - Water WG - Groundwater	Matrix Codes: AQ - Aqueous Liquid NQ - Non-Aqueous Liquid	2082)	7471
ADDRESS: KAW1  CITY: STATE: ZIP: CITY: STATE: ZIP:	CZI CANI (E		ATTN:	Lynn	JECT REFERENCE	PRO
ADDRESS:   APU   ADDRESS:	Email:		7)	535-697-		
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(Av)	16067	ESS:	ADDRI	(ESS:		
CERNI:	LAB PF		CLENT	CLIENT: RAVI	EHVIROHMENTAL SERVICES, THE	LANG



# Chain of Custody Supplement

Lab Project ID:	160673	Date:	<u> </u>
	Per NELAC/ELAP 2	ion Requirements 10/241/242/243/244	
Condition	NELAC compliance with the sample Yes	e condition requirements upo No	on receipt N/A
Container Type  Comment	.e. e.	15035	
Transferred to method- compliant container			
Headspace (<1 mL) Comments	s		<del></del>
Preservation Comments	s		
Chlorine Absent (<0.10 ppm per test strip) Comments	s		
H <b>olding Time</b> Comments	s		
Temperature Comments	s 4°C icel 2/12/16 delivered by dient	15-23 austry s	Peals NA tangoles
Sufficient Sample Quantity  Comments		-	



### ANALYTICAL REPORT

Lab Number: L1604054

Client: Paradigm Environmental Services

179 Lake Avenue Rochester, NY 14608

ATTN: Kate Hansen Phone: (585) 647-2530

Project Name: 160673
Project Number: 160673
Report Date: 02/22/16

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



**Project Name:** 160673 **Project Number:** 160673 **Lab Number:** L1604054 **Report Date:** 02/22/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1604054-01	160673-14 COMP #1 (R1.1,R1.2,R1.3)	SOIL	Not Specified	02/12/16 00:00	02/15/16
L1604054-02	160673-15 COMP #2 (R2.1,R2.2,R2.3)	SOIL	Not Specified	02/12/16 00:00	02/15/16
L1604054-03	160673-16 COMP #3 (R3.1,R3.2,R3.3)	SOIL	Not Specified	02/12/16 00:00	02/15/16
L1604054-04	160673-17 COMP #4 (R3.4,R3.5,R3.6)	SOIL	Not Specified	02/12/16 00:00	02/15/16
L1604054-05	160673-18 COMP #5 (R6.1,R6.2,R6.3)	SOIL	Not Specified	02/12/16 00:00	02/15/16



 Project Name:
 160673
 Lab Number:
 L1604054

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### **Case Narrative**

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please	contact	Client	Services	at 800-	-624-9220	with a	nv c	nuestions
loase	Contact	Olicit	OCI VICCO	at ooo	02- 0220	with a	ıy c	<sub>f</sub> ucsiloris.



 Project Name:
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### **Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chromium, Hexavalent

The WG866851-6 Soluble MS recovery (67%), performed on L1604054-05, was outside the acceptance criteria. This has been attributed to matrix interference. A post-spike was performed with a recovery of 92%.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Michelle M. Morris

Authorized Signature:

Title: Technical Director/Representative

Date: 02/22/16



# **ORGANICS**



# **PESTICIDES**



MDL

RL

02/15/16

**Dilution Factor** 

Column

Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: Date Collected: 02/12/16 00:00

Client ID: 160673-14 COMP #1 (R1.1,R1.2,R1.3) Date Received:

Result

Sample Location: Not Specified Field Prep: Not Specified Matrix: Soil Extraction Method: EPA 3546

Analytical Method: 1,8081B Extraction Date: 02/19/16 09:50
Analytical Date: 02/21/16 21:23 Cleanup Method: EPA 3620B

Analyst: SS Cleanup Date: 02/21/16
Percent Solids: 84%

Organochlorine Pesticides by GC - V	Westborough Lab						
Delta-BHC	ND		ug/kg	1.83	0.359	1	Α
Lindane	ND		ug/kg	0.763	0.341	1	Α
Alpha-BHC	ND		ug/kg	0.763	0.217	1	Α
Beta-BHC	ND		ug/kg	1.83	0.694	1	Α
Heptachlor	ND		ug/kg	0.916	0.411	1	Α
Aldrin	ND		ug/kg	1.83	0.645	1	Α
Heptachlor epoxide	23.3	PI	ug/kg	3.43	1.03	1	Α
Endrin	ND		ug/kg	0.763	0.313	1	Α
Endrin aldehyde	ND		ug/kg	2.29	0.801	1	Α
Endrin ketone	ND		ug/kg	1.83	0.472	1	Α
Dieldrin	47.5	PI	ug/kg	1.14	0.572	1	В
4,4'-DDE	15.8	PI	ug/kg	1.83	0.424	1	В
4,4'-DDD	11.0	PI	ug/kg	1.83	0.653	1	В
4,4'-DDT	ND		ug/kg	3.43	1.47	1	Α
Endosulfan I	ND		ug/kg	1.83	0.433	1	Α
Endosulfan II	ND		ug/kg	1.83	0.612	1	Α
Endosulfan sulfate	ND		ug/kg	0.763	0.363	1	Α
Methoxychlor	ND		ug/kg	3.43	1.07	1	Α
Toxaphene	ND		ug/kg	34.3	9.62	1	Α
cis-Chlordane	14.2		ug/kg	2.29	0.638	1	В
trans-Chlordane	10.7	PI	ug/kg	2.29	0.604	1	Α
Chlordane	116	PI	ug/kg	14.9	6.07	1	Α

Qualifier

Units

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	В
Decachlorobiphenyl	108		30-150	В
2,4,5,6-Tetrachloro-m-xylene	92		30-150	Α
Decachlorobiphenyl	115		30-150	Α



**Parameter** 

Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-01

Client ID: 160673-14 COMP #1 (R1.1,R1.2,R1.3)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8151A

Analytical Date: 02/20/16 21:26

Analyst: EC Percent Solids: 84%

Methylation Date: 02/19/16 23:33

Date Collected: 02/12/16 00:00
Date Received: 02/15/16

Field Prep: Not Specified Extraction Method: EPA 8151A

Extraction Date: 02/18/16 16:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	196	5.21	1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	111		30-150	Α
DCAA	100		30-150	В

Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-02

Client ID: 160673-15 COMP #2 (R2.1,R2.2,R2.3)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/21/16 21:36

Analyst: SS Percent Solids: 80% Date Collected: 02/12/16 00:00
Date Received: 02/15/16
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 02/19/16 09:50
Cleanup Method: EPA 3620B

02/21/16

Cleanup Date:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC -	Westborough Lab						
Delta-BHC	ND		ug/kg	2.00	0.393	1	Α
Lindane	ND		ug/kg	0.835	0.373	1	Α
Alpha-BHC	ND		ug/kg	0.835	0.237	1	Α
Beta-BHC	ND		ug/kg	2.00	0.760	1	Α
Heptachlor	8.13	PI	ug/kg	1.00	0.449	1	В
Aldrin	ND		ug/kg	2.00	0.706	1	Α
Heptachlor epoxide	6.93	PI	ug/kg	3.76	1.13	1	Α
Endrin	ND		ug/kg	0.835	0.342	1	Α
Endrin aldehyde	ND		ug/kg	2.51	0.877	1	Α
Endrin ketone	ND		ug/kg	2.00	0.516	1	Α
Dieldrin	4.34	PI	ug/kg	1.25	0.626	1	В
4,4'-DDE	13.1	PI	ug/kg	2.00	0.464	1	В
4,4'-DDD	13.3	PI	ug/kg	2.00	0.715	1	В
4,4'-DDT	ND		ug/kg	3.76	1.61	1	Α
Endosulfan I	ND		ug/kg	2.00	0.474	1	Α
Endosulfan II	ND		ug/kg	2.00	0.670	1	Α
Endosulfan sulfate	ND		ug/kg	0.835	0.398	1	Α
Methoxychlor	ND		ug/kg	3.76	1.17	1	Α
Toxaphene	ND		ug/kg	37.6	10.5	1	Α
cis-Chlordane	11.0		ug/kg	2.51	0.698	1	Α
trans-Chlordane	9.48	PI	ug/kg	2.51	0.662	1	Α
Chlordane	72.7	PI	ug/kg	16.3	6.64	1	А

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	В
Decachlorobiphenyl	84		30-150	В
2,4,5,6-Tetrachloro-m-xylene	83		30-150	Α
Decachlorobiphenyl	105		30-150	Α



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-02

Client ID: 160673-15 COMP #2 (R2.1,R2.2,R2.3)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8151A

Analytical Date: 02/20/16 21:45

Analyst: EC Percent Solids: 80%

Methylation Date: 02/19/16 23:33

Date Collected: 02/12/16 00:00
Date Received: 02/15/16
Field Prep: Not Specified

Extraction Method:EPA 8151A
Extraction Date: 02/18/16 16:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	209	5.55	1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	110		30-150	Α
DCAA	112		30-150	В

**Project Name:** Lab Number: 160673 L1604054

**Project Number:** 160673 **Report Date:** 02/22/16

**SAMPLE RESULTS** 

Lab ID: Date Collected: 02/12/16 00:00 L1604054-03

Client ID: 160673-16 COMP #3 (R3.1,R3.2,R3.3) Date Received: 02/15/16

Sample Location: Field Prep: Not Specified

Result

Not Specified Matrix: Soil Extraction Method: EPA 3546 02/19/16 09:50 Analytical Method: 1,8081B **Extraction Date:** Analytical Date: 02/21/16 21:49 Cleanup Method: EPA 3620B

Analyst: SS Cleanup Date: 02/21/16 82% Percent Solids:

. d. d. lieto.			••			2	••••
Organochlorine Pesticides by GC - We	estborough Lab						
Delta-BHC	ND		ug/kg	1.92	0.376	1	Α
Lindane	ND		ug/kg	0.800	0.357	1	Α
Alpha-BHC	ND		ug/kg	0.800	0.227	1	Α
Beta-BHC	ND		ug/kg	1.92	0.728	1	Α
Heptachlor	ND		ug/kg	0.960	0.430	1	Α
Aldrin	36.8		ug/kg	1.92	0.676	1	В
Heptachlor epoxide	94.8	PI	ug/kg	3.60	1.08	1	Α
Endrin	ND		ug/kg	0.800	0.328	1	Α
Endrin aldehyde	45.1		ug/kg	2.40	0.840	1	В
Endrin ketone	ND		ug/kg	1.92	0.494	1	Α
Dieldrin	71.3	PI	ug/kg	1.20	0.600	1	В
4,4'-DDE	ND		ug/kg	1.92	0.444	1	Α
4,4'-DDD	ND		ug/kg	1.92	0.684	1	Α
4,4'-DDT	ND		ug/kg	3.60	1.54	1	Α
Endosulfan I	ND		ug/kg	1.92	0.453	1	Α
Endosulfan II	ND		ug/kg	1.92	0.641	1	Α
Endosulfan sulfate	ND		ug/kg	0.800	0.381	1	Α
Methoxychlor	ND		ug/kg	3.60	1.12	1	Α
Toxaphene	ND		ug/kg	36.0	10.1	1	Α
cis-Chlordane	ND		ug/kg	2.40	0.668	1	Α
trans-Chlordane	ND		ug/kg	2.40	0.633	1	Α
Chlordane	ND		ug/kg	15.6	6.36	1	Α

Qualifier

Units

RL

MDL

**Dilution Factor** 

Column

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	В
Decachlorobiphenyl	92		30-150	В
2,4,5,6-Tetrachloro-m-xylene	69		30-150	Α
Decachlorobiphenyl	79		30-150	Α



**Parameter** 

Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-03

Client ID: 160673-16 COMP #3 (R3.1,R3.2,R3.3)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8151A

Analytical Date: 02/20/16 22:25

Analyst: EC Percent Solids: 82%

Methylation Date: 02/19/16 23:33

Date Collected: 02/12/16 00:00
Date Received: 02/15/16
Field Prep: Not Specified

Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 02/18/16 16:06

Qualifier RL MDL **Parameter** Result Units **Dilution Factor** Column Chlorinated Herbicides by GC - Westborough Lab ND 2,4,5-TP (Silvex) 197 5.24 1 Α ug/kg

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	109		30-150	Α
DCAA	104		30-150	В

Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-04

Client ID: 160673-17 COMP #4 (R3.4,R3.5,R3.6)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/21/16 22:02

Analyst: SS Percent Solids: 85% Date Collected: 02/12/16 00:00
Date Received: 02/15/16
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 02/19/16 09:50
Cleanup Method: EPA 3620B

02/21/16

Cleanup Date:

Parameter	Result	Qualifier	Units	RL	MDL	<b>Dilution Factor</b>	Column
Organochlorine Pesticides by GC - We	estborough Lab						
Delta-BHC	ND		ug/kg	1.81	0.355	1	Α
Lindane	ND		ug/kg	0.755	0.338	1	Α
Alpha-BHC	ND		ug/kg	0.755	0.214	1	Α
Beta-BHC	ND		ug/kg	1.81	0.687	1	Α
Heptachlor	ND		ug/kg	0.906	0.406	1	Α
Aldrin	ND		ug/kg	1.81	0.638	1	Α
Heptachlor epoxide	8.85	PI	ug/kg	3.40	1.02	1	Α
Endrin	ND		ug/kg	0.755	0.310	1	Α
Endrin aldehyde	3.28	PI	ug/kg	2.27	0.793	1	Α
Endrin ketone	ND		ug/kg	1.81	0.467	1	Α
Dieldrin	9.31	PI	ug/kg	1.13	0.566	1	В
4,4'-DDE	4.66	PI	ug/kg	1.81	0.419	1	В
4,4'-DDD	ND		ug/kg	1.81	0.646	1	Α
4,4'-DDT	ND		ug/kg	3.40	1.46	1	Α
Endosulfan I	ND		ug/kg	1.81	0.428	1	Α
Endosulfan II	ND		ug/kg	1.81	0.606	1	Α
Endosulfan sulfate	ND		ug/kg	0.755	0.360	1	Α
Methoxychlor	ND		ug/kg	3.40	1.06	1	Α
Toxaphene	ND		ug/kg	34.0	9.52	1	Α
cis-Chlordane	3.89	PI	ug/kg	2.27	0.631	1	В
trans-Chlordane	4.01	PI	ug/kg	2.27	0.598	1	Α
Chlordane	41.4	PI	ug/kg	14.7	6.00	1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	В
Decachlorobiphenyl	104		30-150	В
2,4,5,6-Tetrachloro-m-xylene	75		30-150	Α
Decachlorobiphenyl	88		30-150	Α



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-04

Client ID: 160673-17 COMP #4 (R3.4,R3.5,R3.6)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8151A

Analytical Date: 02/20/16 22:44

Analyst: EC Percent Solids: 85%

Methylation Date: 02/19/16 23:33

Date Collected: 02/12/16 00:00 Date Received: 02/15/16

Field Prep: Not Specified
Extraction Method: EPA 8151A

Extraction Date: 02/18/16 16:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough	Lab						
2,4,5-TP (Silvex)	ND		ug/kg	193	5.14	1	Α

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	105		30-150	Α
DCAA	103		30-150	В

Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-05

Client ID: 160673-18 COMP #5 (R6.1,R6.2,R6.3)

Sample Location: Not Specified

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/21/16 22:15

Analyst: SS Percent Solids: 86% Date Collected: 02/12/16 00:00
Date Received: 02/15/16
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 02/19/16 09:50
Cleanup Method: EPA 3620B
Cleanup Date: 02/21/16

Lindane Alpha-BHC Beta-BHC Heptachlor	ND N	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	1.83 0.761 0.761 1.83 0.914 1.83 3.42 0.761	0.358 0.340 0.216 0.693 0.410 0.643 1.03	1 1 1 1 1 1	A A A A A
Lindane Alpha-BHC Beta-BHC Heptachlor	ND	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	0.761 0.761 1.83 0.914 1.83 3.42	0.340 0.216 0.693 0.410 0.643 1.03	1 1 1 1	A A A A
Lindane Alpha-BHC Beta-BHC Heptachlor	ND	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	0.761 0.761 1.83 0.914 1.83 3.42	0.340 0.216 0.693 0.410 0.643 1.03	1 1 1 1	A A A A
Beta-BHC Heptachlor	ND ND ND ND ND ND	ug/kg ug/kg ug/kg ug/kg ug/kg	1.83 0.914 1.83 3.42	0.693 0.410 0.643 1.03	1 1 1	A A A
Heptachlor	ND ND ND ND	ug/kg ug/kg ug/kg ug/kg	0.914 1.83 3.42	0.410 0.643 1.03	1 1	A A
	ND ND ND	ug/kg ug/kg ug/kg	1.83 3.42	0.643 1.03	1	Α
Aldrin	ND ND	ug/kg ug/kg	3.42	1.03		
	ND				1	Α
Heptachlor epoxide			0.761			
Endrin	ND		0.701	0.312	1	Α
Endrin aldehyde	שאו	ug/kg	2.28	0.799	1	Α
Endrin ketone	ND	ug/kg	1.83	0.470	1	Α
Dieldrin	ND	ug/kg	1.14	0.571	1	Α
4,4'-DDE	ND	ug/kg	1.83	0.422	1	Α
4,4'-DDD	ND	ug/kg	1.83	0.652	1	Α
4,4'-DDT	ND	ug/kg	3.42	1.47	1	Α
Endosulfan I	ND	ug/kg	1.83	0.432	1	Α
Endosulfan II	ND	ug/kg	1.83	0.610	1	Α
Endosulfan sulfate	ND	ug/kg	0.761	0.362	1	Α
Methoxychlor	ND	ug/kg	3.42	1.06	1	Α
Toxaphene	ND	ug/kg	34.2	9.59	1	Α
cis-Chlordane	ND	ug/kg	2.28	0.636	1	Α
trans-Chlordane	ND	ug/kg	2.28	0.603	1	Α
Chlordane	ND	ug/kg	14.8	6.05	1	Α

	Acceptance							
Surrogate	% Recovery	Qualifier	Criteria	Column				
2,4,5,6-Tetrachloro-m-xylene	72		30-150	В				
Decachlorobiphenyl	102		30-150	В				
2,4,5,6-Tetrachloro-m-xylene	72		30-150	Α				
Decachlorobiphenyl	74		30-150	Α				



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-05

Client ID: 160673-18 COMP #5 (R6.1,R6.2,R6.3)

Sample Location: Not Specified

Matrix: Soil Analytical Method: 1,8151A

Analytical Date: 02/20/16 23:04

Analyst: EC Percent Solids: 86%

Methylation Date: 02/19/16 23:33

Date Collected: 02/12/16 00:00

Date Received: 02/15/16
Field Prep: Not Specified
Extraction Method: EPA 8151A
Extraction Date: 02/18/16 16:06

Qualifier RL MDL **Parameter** Result Units **Dilution Factor** Column Chlorinated Herbicides by GC - Westborough Lab ND 2,4,5-TP (Silvex) 191 5.08 1 Α ug/kg

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	96		30-150	А
DCAA	101		30-150	В

 Project Name:
 160673

 Lab Number:
 L1604054

Project Number: 160673 Report Date: 02/22/16

Method Blank Analysis Batch Quality Control

Analytical Method: Analytical Date: 1,8151A 02/20/16 20:27

Analyst:

EC

Methylation Date:

02/19/16 23:33

Extraction Method: EPA 8151A Extraction Date: 02/18/16 16:06

Parameter	Result	Qualifier	Units		RL	MDL	Column
Chlorinated Herbicides by GC -	Westborough L	_ab for sam	ple(s):	01-05	Batch:	WG866426-1	
2,4,5-TP (Silvex)	ND		ug/kg		164	4.36	А

			Acceptance	<del>)</del>
Surrogate	%Recovery	Qualifier	Criteria	Column
DCAA	88		30-150	Α
DCAA	116		30-150	В



 Project Name:
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 Lab Number:
 L1604054

 Project Number:
 160673
 Report Date:
 02/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B Analytical Date: 02/21/16 19:26

Analyst: SS

Extraction Method: EPA 3546
Extraction Date: 02/19/16 09:50
Cleanup Method: EPA 3620B
Cleanup Date: 02/21/16

arameter	Result	Qualifier	Units	RL		MDL	Column
Organochlorine Pesticides by GC	- Westboroug	h Lab for	sample(s):	01-05	Batch:	WG86	6669-1
Delta-BHC	ND		ug/kg	1.51		0.296	Α
Lindane	ND		ug/kg	0.630		0.281	А
Alpha-BHC	ND		ug/kg	0.630		0.179	А
Beta-BHC	ND		ug/kg	1.51		0.573	А
Heptachlor	ND		ug/kg	0.756		0.339	А
Aldrin	ND		ug/kg	1.51		0.532	А
Heptachlor epoxide	ND		ug/kg	2.83		0.850	А
Endrin	ND		ug/kg	0.630		0.258	Α
Endrin aldehyde	ND		ug/kg	1.89		0.661	Α
Endrin ketone	ND		ug/kg	1.51		0.389	Α
Dieldrin	ND		ug/kg	0.944		0.472	Α
4,4'-DDE	ND		ug/kg	1.51		0.349	А
4,4'-DDD	ND		ug/kg	1.51		0.539	А
4,4'-DDT	ND		ug/kg	2.83		1.22	А
Endosulfan I	ND		ug/kg	1.51		0.357	А
Endosulfan II	ND		ug/kg	1.51		0.505	А
Endosulfan sulfate	ND		ug/kg	0.630		0.300	Α
Methoxychlor	ND		ug/kg	2.83		0.882	Α
Toxaphene	ND		ug/kg	28.3		7.93	Α
cis-Chlordane	ND		ug/kg	1.89		0.526	Α
trans-Chlordane	ND		ug/kg	1.89		0.499	Α
Chlordane	ND		ug/kg	12.3		5.01	Α



 Project Name:
 160673

 Lab Number:
 L1604054

Project Number: 160673 Report Date: 02/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B Extraction Method: EPA 3546

 Analytical Date:
 02/21/16 19:26
 Extraction Date:
 02/19/16 09:50

 Analyst:
 SS
 Cleanup Method:
 EPA 3620B

Cleanup Date: 02/21/16

 Parameter
 Result
 Qualifier
 Units
 RL
 MDL

 Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-05
 Batch: WG866669-1

Acceptance
Surrogate %Recovery Qualifier Criteria Column

			.oooptaoo	
Surrogate	%Recovery	Qualifier	Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	В
Decachlorobiphenyl	115		30-150	В
2,4,5,6-Tetrachloro-m-xylene	88		30-150	Α
Decachlorobiphenyl	124		30-150	Α



## Lab Control Sample Analysis Batch Quality Control

**Project Name:** 160673 **Project Number:** 160673

Lab Number: L1604054

Report Date:

Parameter	LCS %Recovery	Qual	LCS %Reco		Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westbor	ough Lab Associate	d sample(s):	01-05 E	Batch:	WG866426-2	WG866426-3				
2,4-D	86		38	8		30-150	77	Q	30	Α
2,4,5-T	90		38	8		30-150	81	Q	30	Α
2,4,5-TP (Silvex)	98		4	1		30-150	82	Q	30	Α

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	Column
						<u> </u>
DCAA	85		40		30-150	Α
DCAA	145		45		30-150	В



## Lab Control Sample Analysis Batch Quality Control

Project Name: 160673 Project Number: 160673 Lab Number: L1604054

**Report Date:** 02/22/16

nmeter	LCS %Recovery	Qual	LCSD %Recove	ry	9 Qual	Recovery		RPD	Qual	RPD Limits	Column
anochlorine Pesticides by GC - Westbor	ough Lab Assoc	iated sample(s):	01-05	Batch:	WG866669	)-2 WG866	6669-3				
Delta-BHC	105		110			30-150		5		30	А
Lindane	101		106			30-150		5		30	А
Alpha-BHC	112		116			30-150		4		30	А
Beta-BHC	102		107			30-150		5		30	А
Heptachlor	99		103			30-150		4		30	А
Aldrin	109		115			30-150		5		30	А
Heptachlor epoxide	109		115			30-150		5		30	А
Endrin	113		120			30-150		6		30	А
Endrin aldehyde	97		84			30-150		14		30	А
Endrin ketone	115		120			30-150		4		30	А
Dieldrin	111		117			30-150		5		30	Α
4,4'-DDE	115		122			30-150		6		30	Α
4,4'-DDD	122		128			30-150		5		30	А
4,4'-DDT	120		130			30-150		8		30	А
Endosulfan I	110		116			30-150		5		30	А
Endosulfan II	125		130			30-150		4		30	Α
Endosulfan sulfate	105		111			30-150		6		30	Α
Methoxychlor	126		130			30-150		3		30	Α
cis-Chlordane	112		118			30-150		5		30	Α
rans-Chlordane	116		123			30-150		6		30	Α



L1604054

# Lab Control Sample Analysis Batch Quality Control

Project Name: 160673 Batch Quality Conf

Lab Number:

**Report Date:** 02/22/16

**Project Number:** 160673

	LCS		LCSD		%Recovery			RPD	
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	

Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG866669-2 WG866669-3

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	Qual	%Recovery	Qual	Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		88		30-150	В
Decachlorobiphenyl	127		124		30-150	В
2,4,5,6-Tetrachloro-m-xylene	89		90		30-150	A
Decachlorobiphenyl	133		134		30-150	Α



# INORGANICS & MISCELLANEOUS



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-01

Client ID: 160673-14 COMP #1 (R1.1,R1.2,R

Sample Location: Not Specified

Matrix: Soil

Date Collected: 02/12/16 00:00

Date Received: 02/15/16

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lab									
Solids, Total	84.2		%	0.100	NA	1	-	02/17/16 04:37	30,2540G	RT
Chromium, Hexavalent	ND		mg/kg	0.95	0.19	1	02/19/16 19:20	02/21/16 21:44	1,7196A	RP



02/12/16 00:00

Date Collected:

**Project Name:** Lab Number: 160673 L1604054

**Project Number:** Report Date: 02/22/16 160673

**SAMPLE RESULTS** 

Lab ID: L1604054-02

160673-15 COMP #2 (R2.1,R2.2,R Client ID: Date Received: 02/15/16 Not Specified Field Prep:

Not Specified Sample Location:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab									
Solids, Total	79.7		%	0.100	NA	1	-	02/17/16 04:37	30,2540G	RT
Chromium, Hexavalent	ND		mg/kg	1.0	0.20	1	02/19/16 19:20	02/21/16 21:44	1,7196A	RP



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-03 Date Collected: 02/12/16 00:00

Client ID: 160673-16 COMP #3 (R3.1,R3.2,R Date Received: 02/15/16
Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab									
Solids, Total	82.0		%	0.100	NA	1	-	02/17/16 04:37	30,2540G	RT
Chromium, Hexavalent	ND	ı	mg/kg	0.98	0.20	1	02/19/16 19:20	02/21/16 21:45	1,7196A	RP



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-04 Date Collected: 02/12/16 00:00

Client ID: 160673-17 COMP #4 (R3.4,R3.5,R Date Received: 02/15/16
Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier U	nits	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab	)								
Solids, Total	84.7		%	0.100	NA	1	-	02/17/16 04:37	30,2540G	RT
Chromium, Hexavalent	ND	m	g/kg	0.94	0.19	1	02/19/16 19:20	02/21/16 21:45	1,7196A	RP



Project Name: 160673 Lab Number: L1604054

Project Number: 160673 Report Date: 02/22/16

**SAMPLE RESULTS** 

Lab ID: L1604054-05 Date Collected: 02/12/16 00:00

Client ID: 160673-18 COMP #5 (R6.1,R6.2,R Date Received: 02/15/16 Sample Location: Not Specified Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	estborough Lab	)								
Solids, Total	86.3		%	0.100	NA	1	-	02/17/16 04:37	30,2540G	RT
Chromium, Hexavalent	ND		ma/ka	0.93	0.18	1	02/19/16 19:20	02/21/16 21:46	1.7196A	RP



 Project Name:
 160673

 Lab Number:
 L1604054

Project Number: 160673 Report Date: 02/22/16

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab for sam	ple(s): 01	-05 Bat	tch: W0	G866851-1				
Chromium, Hexavalent	ND	mg/kg	0.80	0.16	1	02/19/16 19:20	02/21/16 21:46	1,7196A	RP



## Lab Control Sample Analysis Batch Quality Control

**Project Name:** 160673 **Project Number:** 160673

Lab Number: L1604054

Report Date:

Parameter	LCS %Recovery Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
General Chemistry - Westborough Lab	Associated sample(s): 01-05	Batch: WG86685	1-2					
Chromium, Hexavalent	80	-		80-120	-		20	



### Matrix Spike Analysis Batch Quality Control

Project Name: 160673 Project Number: 160673 Lab Number:

L1604054

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual Found	MSD %Recovery Q	Recovery ual Limits	RPD	RPD Qual Limits
General Chemistry - Westborou #5 (R6.1,R6.2,R6.3)	gh Lab Asso	ciated samp	le(s): 01-05	QC Batch II	D: WG866851-5	QC Sample: L160	04054-05 Clier	nt ID: 16	60673-18 COMP
Chromium, Hexavalent	ND	1080	1000	92	-	-	75-125	-	20



# Lab Duplicate Analysis Batch Quality Control

**Project Name:** 160673 **Project Number:** 160673 Lab Number:

L1604054

Report Date:

Parameter	Native Samp	le Duplicate Samp	le Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated samp	ple(s): 01-05 (	QC Batch ID: WG865838-1	QC Sample:	L1604006-01	Client ID:	DUP Sample
Solids, Total	84.5	86.0	%	2		20
General Chemistry - Westborough Lab Associated samp #5 (R6.1,R6.2,R6.3)	ple(s): 01-05 (	QC Batch ID: WG866851-4	QC Sample:	L1604054-05	Client ID:	160673-18 COMP
Chromium, Hexavalent	ND	ND	mg/kg	NC		20



 Project Name:
 160673
 Lab Number:
 L1604054

 Project Number:
 160673
 Report Date:
 02/22/16

### **Sample Receipt and Container Information**

Were project specific reporting limits specified?

Cooler Information Custody Seal

Cooler

A Absent

Container Info	ormation		Temp				
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1604054-01A	Glass 120ml/4oz unpreserved	Α	N/A	4.2	Υ	Absent	HERB-APA(14),TS(7),NYTCL- 8081(14),HEXCR-7196(30)
L1604054-02A	Glass 120ml/4oz unpreserved	Α	N/A	4.2	Υ	Absent	HERB-APA(14),TS(7),NYTCL- 8081(14),HEXCR-7196(30)
L1604054-03A	Glass 120ml/4oz unpreserved	Α	N/A	4.2	Υ	Absent	HERB-APA(14),TS(7),NYTCL- 8081(14),HEXCR-7196(30)
L1604054-04A	Glass 120ml/4oz unpreserved	Α	N/A	4.2	Υ	Absent	HERB-APA(14),TS(7),NYTCL- 8081(14),HEXCR-7196(30)
L1604054-05A	Glass 120ml/4oz unpreserved	Α	N/A	4.2	Υ	Absent	HERB-APA(14),TS(7),NYTCL- 8081(14),HEXCR-7196(30)



 Project Name:
 160673
 Lab Number:
 L1604054

 Project Number:
 160673
 Report Date:
 02/22/16

#### **GLOSSARY**

#### **Acronyms**

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of

PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes

or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes

or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from

dilutions, concentrations or moisture content, where applicable.

MS

- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for

which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

#### Footnotes

 The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method

#### Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

#### **Data Qualifiers**

A - Spectra identified as "Aldol Condensation Product".

- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report with 'J' Qualifiers



 Project Name:
 160673
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 L1604054

 Project Number:
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 Report Date:
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#### **Data Qualifiers**

- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



 Project Name:
 160673
 Lab Number:
 L1604054

 Project Number:
 160673
 Report Date:
 02/22/16

#### REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

#### **LIMITATION OF LIABILITIES**

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc. Facility: Company-wide

**Department: Quality Assurance** 

Title: Certificate/Approval Program Summary

ID No.:17873

Revision 6

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Published Date: 2/3/2016 10:23:10 AM

### **Certification Information**

#### The following analytes are not included in our Primary NELAP Scope of Accreditation:

EPA 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate

(soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-

Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols EPA 9251: NPW: Chloride SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

SM5310C: DW: Dissolved Organic Carbon

#### **Mansfield Facility**

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids EPA 1631E: SCM: Mercury EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: 8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A: Lead; 8270D: bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

#### The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

#### Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; EPA 200.7: Ba,Be,Ca,Cd,Cr,Cu,Na; EPA 245.1: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

#### Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan II, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Pre-Qualtrax Document ID: 08-113 Document Type: Form

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

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