



# Illinois Environmental Protection Agency

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

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

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

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

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

### I. Source Location Information

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

Project Name: FAP 303 (IL 173) Office Phone Number, if available: \_\_\_\_\_

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

28000 block of West IL 173 (Northwest Corner of Wilmot Road and IL 173)

City: Spring Grove State: IL Zip Code: 60081

County: McHenry Township: Burton

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

Latitude: 42.48102 Longitude: -88.20424

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

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

Project Name: FAP 303 (IL 173)

Latitude: 42.48102 Longitude: -88.20424

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and approximately located 35 Ill. Adm. Code 1100.610(a):

LOCATIONS 2291V-3-B01 AND -B02, 2291V-3-B04 THROUGH -B06, AND 2291V-3-B09 THROUGH -B13 WERE SAMPLED ADJACENT TO SITE 2291V-3. SEE TABLE 3a AND FIGURES 2, 3, 4, 7, AND 8 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

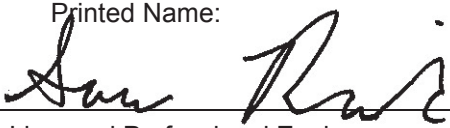
TEKLAB INC. ANALYTICAL REPORT - WORK ORDER: 18020119  
 TESTAMERICA ANALYTICAL REPORT - JOB ID NUMBER: 500-145-720-1

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

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

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

Company Name: Andrews Engineering, Inc.  
 Street Address: 420 Eisenhower Lane North  
 City: Lombard State: IL Zip Code: 60148  
 Phone: 630-953-3332

Savo Radulovic  
 Printed Name:  
  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

June 15, 2018  
 Date:



The following table summarizes the results of laboratory analysis of site soil samples. In reading the table,

- Only parameters reported at concentrations above the most stringent MAC are listed.
- Samples with the notation “**No Contaminants of Concern Noted**” were below the most stringent MAC.

The laboratory report for site soils follows this summary table.

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Volatile Organic Compounds (mg/kg)</b>
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichloropropene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether (MTBE)
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl acetate
Vinyl chloride
Xylenes, total
<b>Semivolatile Organic Compounds (mg/kg)</b>
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Methylphenol
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo(a,h)anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
<b>Inorganic Compounds, Total (mg/kg)</b>
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc
Cyanide
<b>TCLP/SPLP Inorganics (mg/L)</b>
Antimony
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Iron
Lead
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide

**ISGS Site 2291V-3  
Thelen Excavating**

Sample ID	2291V-3-B01	2291V-3-B02	2291V-3-B04	2291V-3-B05	Maximum Allowable Concentration								
Sample Depth (ft)	0-3	0-3	0-3	0-3									
Sample Date	2/1/2018	2/1/2018	2/1/2018	2/1/2018									
PID	0	0	0	0									
Sample pH	7.55	7.5	7.89	8.25									
Matrix	Soil	Soil	Soil	Soil	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area				
<b>Inorganic Compounds, Total (mg/kg)</b>													
Arsenic	10.4		11.2		12	1,3	12.4	1,3	11.3	--	11.3	--	13

**ISGS Site 2291V-3  
Thelen Excavating**

Sample ID	2291V-3-B05 DUP	2291V-3-B06	2291V-3-B09	2291V-3-B10	Maximum Allowable Concentration								
Sample Depth (ft)	0-3	0-3	0-3	0-3									
Sample Date	2/1/2018	2/1/2018	2/1/2018	2/1/2018									
PID	0	0	0	0									
Sample pH	8.21	7.55	8.1	8.18									
Matrix	Soil	Soil	Soil	Soil	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area				
<b>Inorganic Compounds, Total (mg/kg)</b>													
Arsenic	11.9	1,3	8.43		12.8	1,3	12.4	1,3	11.3	--	11.3	--	13

**ISGS Site 2291V-3  
Thelen Excavating**

Sample ID	2291V-3-B11	2291V-3-B12	2291V-3-B13	Maximum Allowable Concentration									
Sample Depth (ft)	0-3	0-3	0-3										
Sample Date	2/1/2018	2/1/2018	2/1/2018										
PID	0	0	0										
Sample pH	8.09	7.86	7.64										
Matrix	Soil	Soil	Soil	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area					
<b>Inorganic Compounds, Total (mg/kg)</b>													
Arsenic	12.1	1,3	11.9	1,3	8.84		11.3		11.3	--	11.3	--	13

February 15, 2018

Colleen Grey  
Andrews Engineering, Inc.  
3300 Ginger Creek Drive  
Springfield, IL 62711-7233  
TEL: (217) 787-2334  
FAX: (217) 787-9495



**RE:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**WorkOrder:** 18020119

Dear Colleen Grey:

TEKLAB, INC received 18 samples on 2/2/2018 10:15:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Shelly A. Hennessy  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



**Client:** Andrews Engineering, Inc.

**Work Order:** 18020119

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 15-Feb-18

### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

- |  |  |
|--|--|
| # - Unknown hydrocarbon                                      | B - Analyte detected in associated Method Blank        |
| E - Value above quantitation range                           | H - Holding times exceeded                             |
| I - Associated internal standard was outside method criteria | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit                     | R - RPD outside accepted recovery limits               |
| S - Spike Recovery outside recovery limits                   | T - TIC(Tentatively identified compound)               |
| X - Value exceeds Maximum Contaminant Level                  |  |



## Accreditations

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020119

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 15-Feb-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-001

Client Sample ID: 2291V-3-B01

Matrix: SOLID

Collection Date: 02/01/2018 13:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		15.3	%	1	02/07/2018 13:48	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		84.7	%	1	02/07/2018 13:48	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.10	0.26	J	0.18	mg/Kg-dry	1	02/08/2018 12:27	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.55		1	02/06/2018 17:46	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.247	mg/L	1	02/13/2018 12:31	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 12:31	138915
Manganese	NELAP	0.0016	0.0050		0.0380	mg/L	1	02/13/2018 12:31	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	0.0185	mg/L	1	02/08/2018 21:07	138773
Barium	NELAP	0.0024	0.0050		0.341	mg/L	1	02/08/2018 21:07	138773
Beryllium	NELAP	0.0003	0.0010		0.0022	mg/L	1	02/08/2018 21:07	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 21:07	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 21:07	138773
Chromium	NELAP	0.0040	0.0100		0.0601	mg/L	1	02/08/2018 21:07	138773
Cobalt	NELAP	0.0022	0.0100		0.0127	mg/L	1	02/08/2018 21:07	138773
Iron	NELAP	0.0450	0.0500	SX	55.4	mg/L	1	02/08/2018 21:07	138773
Lead	NELAP	0.0060	0.0070	X	0.0604	mg/L	1	02/08/2018 21:07	138773
Manganese	NELAP	0.0016	0.0050	X	1.03	mg/L	1	02/08/2018 21:07	138773
Nickel	NELAP	0.0033	0.0100		0.0492	mg/L	1	02/08/2018 21:07	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 21:07	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 21:07	138773
Zinc	NELAP	0.0021	0.0100		0.124	mg/L	1	02/08/2018 21:07	138773
<i>Matrix spike control limits for Fe are not applicable due to high sample/spike ratio.</i>									
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	JS	0.0004	mg/L	5	02/14/2018 12:51	138922
Thallium	NELAP	0.0005	0.0010	J	0.0010	mg/L	5	02/09/2018 13:00	138774
<i>Sb-Matrix spike did not recover within control limits due to matrix interference. Verified by re-prep and re-analysis.</i>									
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100		< 0.00100	mg/L	1	02/08/2018 11:29	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		< 4.81	mg/Kg-dry	1	02/07/2018 22:49	138744
Arsenic	NELAP	0.91	2.27		10.4	mg/Kg-dry	1	02/07/2018 17:07	138730
Barium	NELAP	0.09	0.23		115	mg/Kg-dry	1	02/07/2018 17:07	138730
Beryllium	NELAP	0.03	0.05		0.93	mg/Kg-dry	1	02/07/2018 17:07	138730
Boron	NELAP	0.45	1.82		6.41	mg/Kg-dry	1	02/07/2018 17:07	138730
Cadmium	NELAP	0.05	0.18	J	0.09	mg/Kg-dry	1	02/07/2018 17:07	138730
Chromium	NELAP	0.18	0.45	X	25.7	mg/Kg-dry	1	02/07/2018 17:07	138730
Cobalt	NELAP	0.18	0.45		10.3	mg/Kg-dry	1	02/07/2018 17:07	138730
Copper	NELAP	0.14	0.45		19.0	mg/Kg-dry	1	02/07/2018 17:07	138730
Iron	NELAP	0.91	1.82	X	25500	mg/Kg-dry	1	02/07/2018 17:07	138730
Lead	NELAP	0.45	1.36		14.2	mg/Kg-dry	1	02/07/2018 17:07	138730
Magnesium	NELAP	0.36	4.55		4260	mg/Kg-dry	1	02/07/2018 17:07	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-001

Client Sample ID: 2291V-3-B01

Matrix: SOLID

Collection Date: 02/01/2018 13:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Manganese	NELAP	0.06	0.27	X	757	mg/Kg-dry	1	02/07/2018 17:07	138730
Nickel	NELAP	0.18	0.45		24.3	mg/Kg-dry	1	02/07/2018 17:07	138730
Silver	NELAP	0.14	0.45		< 0.45	mg/Kg-dry	1	02/07/2018 17:07	138730
Thallium	NELAP	1.36	2.36		< 2.36	mg/Kg-dry	1	02/07/2018 17:07	138730
Vanadium	NELAP	0.18	0.91		50.9	mg/Kg-dry	1	02/07/2018 17:07	138730
Zinc	NELAP	0.36	0.91		50.7	mg/Kg-dry	1	02/07/2018 17:07	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.36	0.91	J	0.47	mg/Kg-dry	10	02/07/2018 15:35	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.011		0.043	mg/Kg-dry	1	02/06/2018 8:25	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.155	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
1,2-Dichlorobenzene	NELAP	0.185	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
1,3-Dichlorobenzene	NELAP	0.196	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
1,4-Dichlorobenzene	NELAP	0.185	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,4,5-Trichlorophenol	NELAP	0.128	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,4,6-Trichlorophenol	NELAP	0.147	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,4-Dichlorophenol	NELAP	0.141	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,4-Dimethylphenol	NELAP	0.148	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,4-Dinitrophenol	NELAP	0.125	1.17		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,4-Dinitrotoluene	NELAP	0.121	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2,6-Dinitrotoluene	NELAP	0.126	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2-Chloronaphthalene	NELAP	0.140	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2-Chlorophenol	NELAP	0.148	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2-Methylnaphthalene	NELAP	0.139	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2-Nitroaniline	NELAP	0.186	1.17		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
2-Nitrophenol	NELAP	0.131	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
3,3'-Dichlorobenzidine	NELAP	0.233	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
3-Nitroaniline	NELAP	0.175	1.17		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4,6-Dinitro-2-methylphenol	NELAP	0.126	1.17		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4-Bromophenyl phenyl ether	NELAP	0.107	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4-Chloro-3-methylphenol	NELAP	0.128	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4-Chloroaniline	NELAP	0.175	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4-Chlorophenyl phenyl ether	NELAP	0.115	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4-Nitroaniline	NELAP	0.175	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
4-Nitrophenol	NELAP	0.140	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Acenaphthene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Acenaphthylene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Anthracene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Benzo(a)anthracene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Benzo(a)pyrene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Benzo(b)fluoranthene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Benzo(g,h,i)perylene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Benzo(k)fluoranthene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Bis(2-chloroethoxy)methane	NELAP	0.136	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Bis(2-chloroethyl)ether	NELAP	0.165	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Bis(2-chloroisopropyl)ether	NELAP	0.133	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-001

Client Sample ID: 2291V-3-B01

Matrix: SOLID

Collection Date: 02/01/2018 13:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-ethylhexyl)phthalate	NELAP	0.136	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Butyl benzyl phthalate	NELAP	0.118	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Carbazole	NELAP	0.142	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Chrysene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Dibenzo(a,h)anthracene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Dibenzofuran	NELAP	0.175	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Diethyl phthalate	NELAP	0.112	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Dimethyl phthalate	NELAP	0.106	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Di-n-butyl phthalate	NELAP	0.120	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Di-n-octyl phthalate	NELAP	0.121	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Fluoranthene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Fluorene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Hexachlorobenzene	NELAP	0.195	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Hexachlorobutadiene	NELAP	0.181	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Hexachlorocyclopentadiene	NELAP	0.119	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Hexachloroethane	NELAP	0.195	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Isophorone	NELAP	0.137	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
m,p-Cresol	NELAP	0.147	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Naphthalene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Nitrobenzene	NELAP	0.146	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
N-Nitroso-di-n-propylamine	NELAP	0.128	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
N-Nitrosodiphenylamine	NELAP	0.107	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
o-Cresol	NELAP	0.137	0.583		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Pentachlorophenol	NELAP	0.769	2.33		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Phenanthrene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Phenol	NELAP	0.135	0.408		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Pyrene	NELAP	0.019	0.040		ND	mg/Kg-dry	1	02/10/2018 0:21	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		63.6	%REC	1	02/10/2018 0:21	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		57.1	%REC	1	02/10/2018 0:21	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		49.3	%REC	1	02/10/2018 0:21	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		48.0	%REC	1	02/10/2018 0:21	138832
Surr: Phenol-d5	*	0	38.8-103		50.7	%REC	1	02/10/2018 0:21	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		62.2	%REC	1	02/10/2018 0:21	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,1,2-Trichloroethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,1-Dichloroethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,1-Dichloroethene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,2-Dichloroethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,2-Dichloropropane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
1,3-Dichloropropene, Total	*	0.00081	0.0033		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
2-Butanone	NELAP	0.102	0.163		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
2-Hexanone	NELAP	0.00814	0.0407		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
4-Methyl-2-pentanone	NELAP	0.00814	0.0407		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Acetone	NELAP	0.0134	0.0407		0.105	mg/Kg-dry	1	02/06/2018 15:58	138747



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-001

Client Sample ID: 2291V-3-B01

Matrix: SOLID

Collection Date: 02/01/2018 13:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzene	NELAP	0.00041	0.0008		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Bromodichloromethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Bromoform	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Bromomethane	NELAP	0.00204	0.0081		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Carbon disulfide	NELAP	0.00244	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Carbon tetrachloride	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Chlorobenzene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Chloroethane	NELAP	0.00163	0.0081		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Chloroform	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Chloromethane	NELAP	0.00163	0.0081		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
cis-1,2-Dichloroethene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
cis-1,3-Dichloropropene	NELAP	0.00081	0.0033		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Dibromochloromethane	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Ethylbenzene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
m,p-Xylenes	NELAP	0.00163	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Methyl tert-butyl ether	NELAP	0.00041	0.0016		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Methylene chloride	NELAP	0.00108	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
o-Xylene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Styrene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Tetrachloroethene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Toluene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
trans-1,2-Dichloroethene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
trans-1,3-Dichloropropene	NELAP	0.00081	0.0033		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Trichloroethene	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Vinyl acetate	NELAP	0.0163	0.0407		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Vinyl chloride	NELAP	0.00041	0.0016		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Xylenes, Total	NELAP	0.00081	0.0041		ND	mg/Kg-dry	1	02/06/2018 15:58	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		103.0	%REC	1	02/06/2018 15:58	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		99.5	%REC	1	02/06/2018 15:58	138747
Surr: Dibromofluoromethane	*	0	77.7-120		99.2	%REC	1	02/06/2018 15:58	138747
Surr: Toluene-d8	*	0	86-116		99.9	%REC	1	02/06/2018 15:58	138747



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-002

Client Sample ID: 2291V-3-B02

Matrix: SOLID

Collection Date: 02/01/2018 13:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.0	%	1	02/07/2018 13:48	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		79.0	%	1	02/07/2018 13:48	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.28		< 0.28	mg/Kg-dry	1	02/08/2018 12:31	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.50		1	02/06/2018 17:53	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 12:38	138915
Beryllium	NELAP	0.0003	0.0010		< 0.0010	mg/L	1	02/13/2018 12:38	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 12:38	138915
Iron	NELAP	0.0070	0.0200		0.270	mg/L	1	02/13/2018 12:38	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 12:38	138915
Manganese	NELAP	0.0016	0.0050		0.0422	mg/L	1	02/13/2018 12:38	138915
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 12:38	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0510	mg/L	1	02/08/2018 21:18	138773
Barium	NELAP	0.0024	0.0050		0.833	mg/L	1	02/08/2018 21:18	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0055	mg/L	1	02/08/2018 21:18	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 21:18	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 21:18	138773
Chromium	NELAP	0.0040	0.0100	X	0.149	mg/L	1	02/08/2018 21:18	138773
Cobalt	NELAP	0.0022	0.0100		0.0394	mg/L	1	02/08/2018 21:18	138773
Iron	NELAP	0.0450	0.0500	SX	148	mg/L	1	02/08/2018 21:18	138773
Lead	NELAP	0.0060	0.0070	X	0.0680	mg/L	1	02/08/2018 21:18	138773
Manganese	NELAP	0.0016	0.0050	X	2.78	mg/L	1	02/08/2018 21:18	138773
Nickel	NELAP	0.0033	0.0100	X	0.119	mg/L	1	02/08/2018 21:18	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 21:18	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 21:18	138773
Zinc	NELAP	0.0021	0.0100		0.282	mg/L	1	02/08/2018 21:18	138773
<i>Matrix spike control limits for Fe are not applicable due to high sample/spike ratio.</i>									
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	JS	0.0007	mg/L	5	02/14/2018 13:00	138922
Thallium	NELAP	0.0005	0.0010		0.0017	mg/L	5	02/09/2018 13:09	138774
<i>Matrix spike did not recover within control limits due to sample composition. Verified by re-prep and re-analysis..</i>									
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00011	mg/L	1	02/08/2018 11:41	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		< 4.81	mg/Kg-dry	1	02/07/2018 22:55	138744
Arsenic	NELAP	0.94	2.36		11.2	mg/Kg-dry	1	02/07/2018 17:11	138730
Barium	NELAP	0.09	0.24		146	mg/Kg-dry	1	02/07/2018 17:11	138730
Beryllium	NELAP	0.03	0.05		1.01	mg/Kg-dry	1	02/07/2018 17:11	138730
Boron	NELAP	0.47	1.89		6.85	mg/Kg-dry	1	02/07/2018 17:11	138730
Cadmium	NELAP	0.05	0.19	J	0.15	mg/Kg-dry	1	02/07/2018 17:11	138730
Chromium	NELAP	0.19	0.47	X	29.9	mg/Kg-dry	1	02/07/2018 17:11	138730
Cobalt	NELAP	0.19	0.47		13.1	mg/Kg-dry	1	02/07/2018 17:11	138730



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-002

Client Sample ID: 2291V-3-B02

Matrix: SOLID

Collection Date: 02/01/2018 13:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Copper	NELAP	0.14	0.47		21.3	mg/Kg-dry	1	02/07/2018 17:11	138730
Iron	NELAP	0.94	1.89	SX	28300	mg/Kg-dry	1	02/07/2018 17:11	138730
Lead	NELAP	0.47	1.42		19.1	mg/Kg-dry	1	02/07/2018 17:11	138730
Magnesium	NELAP	0.38	4.72	S	5040	mg/Kg-dry	1	02/07/2018 17:11	138730
Manganese	NELAP	0.07	0.28	SX	930	mg/Kg-dry	1	02/07/2018 17:11	138730
Nickel	NELAP	0.19	0.47		26.2	mg/Kg-dry	1	02/07/2018 17:11	138730
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/07/2018 17:11	138730
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/07/2018 17:11	138730
Vanadium	NELAP	0.19	0.94		54.5	mg/Kg-dry	1	02/07/2018 17:11	138730
Zinc	NELAP	0.38	0.94		59.9	mg/Kg-dry	1	02/07/2018 17:11	138730
<i>Matrix spike control limits for Fe, Mg, &amp; Mn are not applicable due to high sample/spike ratio.</i>									
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94	J	0.59	mg/Kg-dry	10	02/07/2018 15:44	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.040	mg/Kg-dry	1	02/06/2018 8:27	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
1,2-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
1,3-Dichlorobenzene	NELAP	0.210	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
1,4-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,4,5-Trichlorophenol	NELAP	0.137	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,4,6-Trichlorophenol	NELAP	0.157	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,4-Dichlorophenol	NELAP	0.151	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,4-Dimethylphenol	NELAP	0.158	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,4-Dinitrophenol	NELAP	0.133	1.25		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,4-Dinitrotoluene	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2,6-Dinitrotoluene	NELAP	0.135	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2-Chloronaphthalene	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2-Chlorophenol	NELAP	0.158	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2-Methylnaphthalene	NELAP	0.148	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
2-Nitrophenol	NELAP	0.140	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
3,3'-Dichlorobenzidine	NELAP	0.249	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
3-Nitroaniline	NELAP	0.187	1.25		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4-Bromophenyl phenyl ether	NELAP	0.115	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4-Chloro-3-methylphenol	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4-Chloroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4-Chlorophenyl phenyl ether	NELAP	0.123	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4-Nitroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
4-Nitrophenol	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832



Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-002

Client Sample ID: 2291V-3-B02

Matrix: SOLID

Collection Date: 02/01/2018 13:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Bis(2-chloroethoxy)methane	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Bis(2-chloroethyl)ether	NELAP	0.177	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Bis(2-chloroisopropyl)ether	NELAP	0.142	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Butyl benzyl phthalate	NELAP	0.126	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Carbazole	NELAP	0.152	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Dibenzofuran	NELAP	0.187	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Diethyl phthalate	NELAP	0.120	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Dimethyl phthalate	NELAP	0.114	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Di-n-butyl phthalate	NELAP	0.128	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Di-n-octyl phthalate	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Hexachlorobenzene	NELAP	0.208	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Hexachlorobutadiene	NELAP	0.193	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Hexachlorocyclopentadiene	NELAP	0.127	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Hexachloroethane	NELAP	0.208	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Isophorone	NELAP	0.147	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
m,p-Cresol	NELAP	0.157	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Nitrobenzene	NELAP	0.156	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
N-Nitroso-di-n-propylamine	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
N-Nitrosodiphenylamine	NELAP	0.115	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
o-Cresol	NELAP	0.147	0.624		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Pentachlorophenol	NELAP	0.823	2.49		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Phenol	NELAP	0.145	0.437		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 11:09	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		78.9	%REC	1	02/09/2018 11:09	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		54.6	%REC	1	02/09/2018 11:09	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		57.7	%REC	1	02/09/2018 11:09	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		58.8	%REC	1	02/09/2018 11:09	138832
Surr: Phenol-d5	*	0	38.8-103		61.8	%REC	1	02/09/2018 11:09	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		78.6	%REC	1	02/09/2018 11:09	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
1,1,2-Trichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
1,1-Dichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
1,1-Dichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
1,2-Dichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
1,2-Dichloropropane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-002

Client Sample ID: 2291V-3-B02

Matrix: SOLID

Collection Date: 02/01/2018 13:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,3-Dichloropropene, Total	*	0.00091	0.0036		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
2-Butanone	NELAP	0.114	0.183		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
2-Hexanone	NELAP	0.00913	0.0456		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
4-Methyl-2-pentanone	NELAP	0.00913	0.0456		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Acetone	NELAP	0.0151	0.0456		0.0692	mg/Kg-dry	1	02/06/2018 16:24	138747
Benzene	NELAP	0.00046	0.0009		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Bromodichloromethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Bromoform	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Bromomethane	NELAP	0.00228	0.0091		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Carbon disulfide	NELAP	0.00274	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Carbon tetrachloride	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Chlorobenzene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Chloroethane	NELAP	0.00183	0.0091		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Chloroform	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Chloromethane	NELAP	0.00183	0.0091		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
cis-1,2-Dichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
cis-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Dibromochloromethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Ethylbenzene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
m,p-Xylenes	NELAP	0.00183	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Methyl tert-butyl ether	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Methylene chloride	NELAP	0.00121	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
o-Xylene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Styrene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Tetrachloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Toluene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
trans-1,2-Dichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
trans-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Trichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Vinyl acetate	NELAP	0.0183	0.0456		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Vinyl chloride	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Xylenes, Total	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/06/2018 16:24	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		104.2	%REC	1	02/06/2018 16:24	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		98.2	%REC	1	02/06/2018 16:24	138747
Surr: Dibromofluoromethane	*	0	77.7-120		100.0	%REC	1	02/06/2018 16:24	138747
Surr: Toluene-d8	*	0	86-116		99.4	%REC	1	02/06/2018 16:24	138747



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-004

Client Sample ID: 2291V-3-B04

Matrix: SOLID

Collection Date: 02/01/2018 13:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		17.6	%	1	02/07/2018 13:48	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		82.4	%	1	02/07/2018 13:48	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.29		< 0.29	mg/Kg-dry	1	02/08/2018 13:23	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.89		1	02/06/2018 17:59	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 12:53	138915
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/13/2018 12:53	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 12:53	138915
Iron	NELAP	0.0070	0.0200		0.232	mg/L	1	02/13/2018 12:53	138915
Lead	NELAP	0.0060	0.0070		0.0080	mg/L	1	02/13/2018 12:53	138915
Manganese	NELAP	0.0016	0.0050		0.0077	mg/L	1	02/13/2018 12:53	138915
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 12:53	138915
<b>SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS</b>									
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/14/2018 12:19	138916
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0683	mg/L	1	02/08/2018 21:29	138773
Barium	NELAP	0.0024	0.0050		0.977	mg/L	1	02/08/2018 21:29	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0067	mg/L	1	02/08/2018 21:29	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 21:29	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 21:29	138773
Chromium	NELAP	0.0040	0.0100	X	0.178	mg/L	1	02/08/2018 21:29	138773
Cobalt	NELAP	0.0022	0.0100		0.0449	mg/L	1	02/08/2018 21:29	138773
Iron	NELAP	0.0450	0.0500	X	185	mg/L	1	02/08/2018 21:29	138773
Lead	NELAP	0.0060	0.0070	X	0.0746	mg/L	1	02/08/2018 21:29	138773
Manganese	NELAP	0.0016	0.0050	X	3.17	mg/L	1	02/08/2018 21:29	138773
Nickel	NELAP	0.0033	0.0100	X	0.164	mg/L	1	02/08/2018 21:29	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 21:29	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 21:29	138773
Zinc	NELAP	0.0021	0.0100		0.344	mg/L	1	02/08/2018 21:29	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	02/08/2018 13:14	138774
Thallium	NELAP	0.0005	0.0010	X	0.0023	mg/L	5	02/09/2018 13:25	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00031	mg/L	1	02/08/2018 11:52	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.47	4.90		< 4.90	mg/Kg-dry	1	02/07/2018 23:18	138744
Arsenic	NELAP	0.96	2.40	X	12.0	mg/Kg-dry	1	02/07/2018 17:26	138730
Barium	NELAP	0.10	0.24		132	mg/Kg-dry	1	02/07/2018 17:26	138730
Beryllium	NELAP	0.03	0.05		1.02	mg/Kg-dry	1	02/07/2018 17:26	138730
Boron	NELAP	0.48	1.92		8.35	mg/Kg-dry	1	02/07/2018 17:26	138730
Cadmium	NELAP	0.05	0.19	J	0.11	mg/Kg-dry	1	02/07/2018 17:26	138730
Chromium	NELAP	0.19	0.48	X	28.3	mg/Kg-dry	1	02/07/2018 17:26	138730



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-004

Client Sample ID: 2291V-3-B04

Matrix: SOLID

Collection Date: 02/01/2018 13:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Cobalt	NELAP	0.19	0.48		11.8	mg/Kg-dry	1	02/07/2018 17:26	138730
Copper	NELAP	0.14	0.48		23.8	mg/Kg-dry	1	02/07/2018 17:26	138730
Iron	NELAP	0.96	1.92	X	29400	mg/Kg-dry	1	02/07/2018 17:26	138730
Lead	NELAP	0.48	1.44		15.0	mg/Kg-dry	1	02/07/2018 17:26	138730
Magnesium	NELAP	0.38	4.81		4710	mg/Kg-dry	1	02/07/2018 17:26	138730
Manganese	NELAP	0.07	0.29	X	854	mg/Kg-dry	1	02/07/2018 17:26	138730
Nickel	NELAP	0.19	0.48		29.7	mg/Kg-dry	1	02/07/2018 17:26	138730
Silver	NELAP	0.14	0.48		< 0.48	mg/Kg-dry	1	02/07/2018 17:26	138730
Thallium	NELAP	1.44	2.50		< 2.50	mg/Kg-dry	1	02/07/2018 17:26	138730
Vanadium	NELAP	0.19	0.96		54.0	mg/Kg-dry	1	02/07/2018 17:26	138730
Zinc	NELAP	0.38	0.96		56.7	mg/Kg-dry	1	02/07/2018 17:26	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.96	J	0.50	mg/Kg-dry	10	02/07/2018 16:16	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.046	mg/Kg-dry	1	02/06/2018 8:31	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.160	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
1,2-Dichlorobenzene	NELAP	0.191	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
1,3-Dichlorobenzene	NELAP	0.202	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
1,4-Dichlorobenzene	NELAP	0.191	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,4,5-Trichlorophenol	NELAP	0.132	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,4,6-Trichlorophenol	NELAP	0.151	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,4-Dichlorophenol	NELAP	0.145	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,4-Dimethylphenol	NELAP	0.153	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,4-Dinitrophenol	NELAP	0.129	1.20		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,4-Dinitrotoluene	NELAP	0.125	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2,6-Dinitrotoluene	NELAP	0.130	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2-Chloronaphthalene	NELAP	0.144	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2-Chlorophenol	NELAP	0.153	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2-Methylnaphthalene	NELAP	0.143	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2-Nitroaniline	NELAP	0.192	1.20		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
2-Nitrophenol	NELAP	0.135	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
3,3'-Dichlorobenzidine	NELAP	0.240	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
3-Nitroaniline	NELAP	0.180	1.20		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4,6-Dinitro-2-methylphenol	NELAP	0.130	1.20		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4-Bromophenyl phenyl ether	NELAP	0.111	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4-Chloro-3-methylphenol	NELAP	0.132	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4-Chloroaniline	NELAP	0.180	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4-Chlorophenyl phenyl ether	NELAP	0.119	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4-Nitroaniline	NELAP	0.180	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
4-Nitrophenol	NELAP	0.144	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832

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Report Date: 15-Feb-18

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Client Sample ID: 2291V-3-B04

Matrix: SOLID

Collection Date: 02/01/2018 13:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Bis(2-chloroethoxy)methane	NELAP	0.141	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Bis(2-chloroethyl)ether	NELAP	0.171	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Bis(2-chloroisopropyl)ether	NELAP	0.137	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.141	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Butyl benzyl phthalate	NELAP	0.121	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Carbazole	NELAP	0.147	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Dibenzofuran	NELAP	0.180	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Diethyl phthalate	NELAP	0.115	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Dimethyl phthalate	NELAP	0.109	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Di-n-butyl phthalate	NELAP	0.124	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Di-n-octyl phthalate	NELAP	0.125	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Hexachlorobenzene	NELAP	0.201	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Hexachlorobutadiene	NELAP	0.186	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Hexachlorocyclopentadiene	NELAP	0.123	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Hexachloroethane	NELAP	0.201	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Isophorone	NELAP	0.142	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
m,p-Cresol	NELAP	0.151	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Nitrobenzene	NELAP	0.150	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
N-Nitroso-di-n-propylamine	NELAP	0.132	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
N-Nitrosodiphenylamine	NELAP	0.111	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
o-Cresol	NELAP	0.142	0.601		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Pentachlorophenol	NELAP	0.793	2.40		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Phenol	NELAP	0.139	0.421		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/09/2018 11:42	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		73.9	%REC	1	02/09/2018 11:42	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		47.7	%REC	1	02/09/2018 11:42	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		50.3	%REC	1	02/09/2018 11:42	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		52.1	%REC	1	02/09/2018 11:42	138832
Surr: Phenol-d5	*	0	38.8-103		51.9	%REC	1	02/09/2018 11:42	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		75.0	%REC	1	02/09/2018 11:42	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
1,1,2-Trichloroethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
1,1-Dichloroethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
1,1-Dichloroethene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
1,2-Dichloroethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
1,2-Dichloropropane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747

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Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-004

Client Sample ID: 2291V-3-B04

Matrix: SOLID

Collection Date: 02/01/2018 13:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,3-Dichloropropene, Total	*	0.00088	0.0035		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
2-Butanone	NELAP	0.110	0.175		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
2-Hexanone	NELAP	0.00877	0.0439		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
4-Methyl-2-pentanone	NELAP	0.00877	0.0439		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Acetone	NELAP	0.0145	0.0439		0.0840	mg/Kg-dry	1	02/06/2018 17:16	138747
Benzene	NELAP	0.00044	0.0009		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Bromodichloromethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Bromoform	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Bromomethane	NELAP	0.00219	0.0088		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Carbon disulfide	NELAP	0.00263	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Carbon tetrachloride	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Chlorobenzene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Chloroethane	NELAP	0.00175	0.0088		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Chloroform	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Chloromethane	NELAP	0.00175	0.0088		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
cis-1,2-Dichloroethene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
cis-1,3-Dichloropropene	NELAP	0.00088	0.0035		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Dibromochloromethane	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Ethylbenzene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
m,p-Xylenes	NELAP	0.00175	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Methyl tert-butyl ether	NELAP	0.00044	0.0018		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Methylene chloride	NELAP	0.00117	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
o-Xylene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Styrene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Tetrachloroethene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Toluene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
trans-1,2-Dichloroethene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
trans-1,3-Dichloropropene	NELAP	0.00088	0.0035		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Trichloroethene	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Vinyl acetate	NELAP	0.0175	0.0439		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Vinyl chloride	NELAP	0.00044	0.0018		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Xylenes, Total	NELAP	0.00088	0.0044		ND	mg/Kg-dry	1	02/06/2018 17:16	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		103.7	%REC	1	02/06/2018 17:16	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		96.7	%REC	1	02/06/2018 17:16	138747
Surr: Dibromofluoromethane	*	0	77.7-120		98.1	%REC	1	02/06/2018 17:16	138747
Surr: Toluene-d8	*	0	86-116		98.5	%REC	1	02/06/2018 17:16	138747

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-005

Client Sample ID: 2291V-3-B05

Matrix: SOLID

Collection Date: 02/01/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.1	%	1	02/07/2018 13:49	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.9	%	1	02/07/2018 13:49	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.31	J	0.12	mg/Kg-dry	1	02/08/2018 12:44	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.25		1	02/05/2018 21:07	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 12:57	138915
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/13/2018 12:57	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 12:57	138915
Iron	NELAP	0.0070	0.0200		0.156	mg/L	1	02/13/2018 12:57	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 12:57	138915
Manganese	NELAP	0.0016	0.0050		0.0176	mg/L	1	02/13/2018 12:57	138915
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 12:57	138915
<b>SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY IC PMS</b>									
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/14/2018 12:27	138916
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0794	mg/L	1	02/08/2018 21:44	138773
Barium	NELAP	0.0024	0.0050		1.04	mg/L	1	02/08/2018 21:44	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0082	mg/L	1	02/08/2018 21:44	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 21:44	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 21:44	138773
Chromium	NELAP	0.0040	0.0100	X	0.216	mg/L	1	02/08/2018 21:44	138773
Cobalt	NELAP	0.0022	0.0100		0.0533	mg/L	1	02/08/2018 21:44	138773
Iron	NELAP	0.0450	0.0500	X	235	mg/L	1	02/08/2018 21:44	138773
Lead	NELAP	0.0060	0.0070	X	0.101	mg/L	1	02/08/2018 21:44	138773
Manganese	NELAP	0.0016	0.0050	X	3.66	mg/L	1	02/08/2018 21:44	138773
Nickel	NELAP	0.0033	0.0100	X	0.197	mg/L	1	02/08/2018 21:44	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 21:44	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 21:44	138773
Zinc	NELAP	0.0021	0.0100		0.431	mg/L	1	02/08/2018 21:44	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	02/08/2018 13:22	138774
Thallium	NELAP	0.0005	0.0010	X	0.0027	mg/L	5	02/09/2018 13:33	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00040	mg/L	1	02/08/2018 11:55	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.42	4.72		< 4.72	mg/Kg-dry	1	02/07/2018 23:24	138744
Arsenic	NELAP	0.98	2.45	X	12.4	mg/Kg-dry	1	02/07/2018 17:29	138730
Barium	NELAP	0.10	0.25		132	mg/Kg-dry	1	02/07/2018 17:29	138730
Beryllium	NELAP	0.03	0.05		1.04	mg/Kg-dry	1	02/07/2018 17:29	138730
Boron	NELAP	0.49	1.96		8.07	mg/Kg-dry	1	02/07/2018 17:29	138730
Cadmium	NELAP	0.05	0.20	J	0.10	mg/Kg-dry	1	02/07/2018 17:29	138730
Chromium	NELAP	0.20	0.49	X	28.5	mg/Kg-dry	1	02/07/2018 17:29	138730



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-005

Client Sample ID: 2291V-3-B05

Matrix: SOLID

Collection Date: 02/01/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Cobalt	NELAP	0.20	0.49		12.0	mg/Kg-dry	1	02/07/2018 17:29	138730
Copper	NELAP	0.15	0.49		24.3	mg/Kg-dry	1	02/07/2018 17:29	138730
Iron	NELAP	0.98	1.96	X	30300	mg/Kg-dry	1	02/07/2018 17:29	138730
Lead	NELAP	0.49	1.47		16.4	mg/Kg-dry	1	02/07/2018 17:29	138730
Magnesium	NELAP	0.39	4.90		4680	mg/Kg-dry	1	02/07/2018 17:29	138730
Manganese	NELAP	0.07	0.29	X	881	mg/Kg-dry	1	02/07/2018 17:29	138730
Nickel	NELAP	0.20	0.49		29.1	mg/Kg-dry	1	02/07/2018 17:29	138730
Silver	NELAP	0.15	0.49		< 0.49	mg/Kg-dry	1	02/07/2018 17:29	138730
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/07/2018 17:29	138730
Vanadium	NELAP	0.20	0.98		54.1	mg/Kg-dry	1	02/07/2018 17:29	138730
Zinc	NELAP	0.39	0.98		57.5	mg/Kg-dry	1	02/07/2018 17:29	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98		< 0.98	mg/Kg-dry	10	02/07/2018 16:25	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.041	mg/Kg-dry	1	02/06/2018 8:34	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
1,2-Dichlorobenzene	NELAP	0.199	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
1,3-Dichlorobenzene	NELAP	0.210	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
1,4-Dichlorobenzene	NELAP	0.199	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,4,5-Trichlorophenol	NELAP	0.138	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,4,6-Trichlorophenol	NELAP	0.158	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,4-Dichlorophenol	NELAP	0.151	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,4-Dimethylphenol	NELAP	0.159	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,4-Dinitrotoluene	NELAP	0.130	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2,6-Dinitrotoluene	NELAP	0.135	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2-Chloronaphthalene	NELAP	0.150	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2-Chlorophenol	NELAP	0.159	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2-Methylnaphthalene	NELAP	0.149	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
2-Nitrophenol	NELAP	0.140	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
3,3'-Dichlorobenzidine	NELAP	0.250	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
3-Nitroaniline	NELAP	0.188	1.25		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4-Bromophenyl phenyl ether	NELAP	0.115	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4-Chloro-3-methylphenol	NELAP	0.138	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4-Chloroaniline	NELAP	0.188	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4-Chlorophenyl phenyl ether	NELAP	0.124	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4-Nitroaniline	NELAP	0.188	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
4-Nitrophenol	NELAP	0.150	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832



Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-005

Client Sample ID: 2291V-3-B05

Matrix: SOLID

Collection Date: 02/01/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Bis(2-chloroethoxy)methane	NELAP	0.146	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Bis(2-chloroethyl)ether	NELAP	0.178	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Bis(2-chloroisopropyl)ether	NELAP	0.143	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Butyl benzyl phthalate	NELAP	0.126	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Carbazole	NELAP	0.153	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Dibenzofuran	NELAP	0.188	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Diethyl phthalate	NELAP	0.120	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Dimethyl phthalate	NELAP	0.114	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Di-n-butyl phthalate	NELAP	0.129	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Di-n-octyl phthalate	NELAP	0.130	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Hexachlorobenzene	NELAP	0.209	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Hexachlorobutadiene	NELAP	0.194	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Hexachlorocyclopentadiene	NELAP	0.128	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Hexachloroethane	NELAP	0.209	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Isophorone	NELAP	0.148	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
m,p-Cresol	NELAP	0.158	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Nitrobenzene	NELAP	0.156	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
N-Nitroso-di-n-propylamine	NELAP	0.138	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
N-Nitrosodiphenylamine	NELAP	0.115	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
o-Cresol	NELAP	0.148	0.625		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Pentachlorophenol	NELAP	0.825	2.50		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Phenol	NELAP	0.145	0.438		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 12:16	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		73.8	%REC	1	02/09/2018 12:16	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		49.1	%REC	1	02/09/2018 12:16	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		48.7	%REC	1	02/09/2018 12:16	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		52.5	%REC	1	02/09/2018 12:16	138832
Surr: Phenol-d5	*	0	38.8-103		51.5	%REC	1	02/09/2018 12:16	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		78.6	%REC	1	02/09/2018 12:16	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
1,1,2-Trichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
1,1-Dichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
1,1-Dichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
1,2-Dichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
1,2-Dichloropropane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-005

Client Sample ID: 2291V-3-B05

Matrix: SOLID

Collection Date: 02/01/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,3-Dichloropropene, Total	*	0.00092	0.0037		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
2-Butanone	NELAP	0.115	0.184		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
2-Hexanone	NELAP	0.00922	0.0461		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
4-Methyl-2-pentanone	NELAP	0.00922	0.0461		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Acetone	NELAP	0.0152	0.0461		0.0842	mg/Kg-dry	1	02/06/2018 17:42	138747
Benzene	NELAP	0.00046	0.0009		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Bromodichloromethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Bromoform	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Bromomethane	NELAP	0.00230	0.0092		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Carbon disulfide	NELAP	0.00276	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Carbon tetrachloride	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Chlorobenzene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Chloroethane	NELAP	0.00184	0.0092		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Chloroform	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Chloromethane	NELAP	0.00184	0.0092		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
cis-1,2-Dichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
cis-1,3-Dichloropropene	NELAP	0.00092	0.0037		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Dibromochloromethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Ethylbenzene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
m,p-Xylenes	NELAP	0.00184	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Methyl tert-butyl ether	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Methylene chloride	NELAP	0.00123	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
o-Xylene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Styrene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Tetrachloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Toluene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
trans-1,2-Dichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
trans-1,3-Dichloropropene	NELAP	0.00092	0.0037		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Trichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Vinyl acetate	NELAP	0.0184	0.0461		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Vinyl chloride	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Xylenes, Total	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/06/2018 17:42	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		104.6	%REC	1	02/06/2018 17:42	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		97.1	%REC	1	02/06/2018 17:42	138747
Surr: Dibromofluoromethane	*	0	77.7-120		99.3	%REC	1	02/06/2018 17:42	138747
Surr: Toluene-d8	*	0	86-116		99.2	%REC	1	02/06/2018 17:42	138747

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-006

Client Sample ID: 2291V-3-B05 DUP

Matrix: SOLID

Collection Date: 02/01/2018 12:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.5</b>	%	1	02/07/2018 13:49	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.5</b>	%	1	02/07/2018 13:49	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.13	0.31		<b>&lt; 0.31</b>	mg/Kg-dry	1	02/08/2018 12:48	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.21</b>		1	02/05/2018 21:10	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/13/2018 13:00	138915
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0005</b>	mg/L	1	02/13/2018 13:00	138915
Chromium	NELAP	0.0020	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/13/2018 13:00	138915
Iron	NELAP	0.0070	0.0200		<b>0.152</b>	mg/L	1	02/13/2018 13:00	138915
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/13/2018 13:00	138915
Manganese	NELAP	0.0016	0.0050		<b>0.0129</b>	mg/L	1	02/13/2018 13:00	138915
Nickel	NELAP	0.0033	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/13/2018 13:00	138915
<b>SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS</b>									
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/14/2018 12:35	138916
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	<b>0.0685</b>	mg/L	1	02/08/2018 21:47	138773
Barium	NELAP	0.0024	0.0050		<b>0.934</b>	mg/L	1	02/08/2018 21:47	138773
Beryllium	NELAP	0.0003	0.0010	X	<b>0.0068</b>	mg/L	1	02/08/2018 21:47	138773
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/08/2018 21:47	138773
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/08/2018 21:47	138773
Chromium	NELAP	0.0040	0.0100	X	<b>0.182</b>	mg/L	1	02/08/2018 21:47	138773
Cobalt	NELAP	0.0022	0.0100		<b>0.0483</b>	mg/L	1	02/08/2018 21:47	138773
Iron	NELAP	0.0450	0.0500	X	<b>200</b>	mg/L	1	02/08/2018 21:47	138773
Lead	NELAP	0.0060	0.0070	X	<b>0.0833</b>	mg/L	1	02/08/2018 21:47	138773
Manganese	NELAP	0.0016	0.0050	X	<b>3.17</b>	mg/L	1	02/08/2018 21:47	138773
Nickel	NELAP	0.0033	0.0100	X	<b>0.182</b>	mg/L	1	02/08/2018 21:47	138773
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/08/2018 21:47	138773
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/08/2018 21:47	138773
Zinc	NELAP	0.0021	0.0100		<b>0.362</b>	mg/L	1	02/08/2018 21:47	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		<b>0.0013</b>	mg/L	5	02/08/2018 14:41	138774
Thallium	NELAP	0.0005	0.0010	X	<b>0.0024</b>	mg/L	5	02/09/2018 13:41	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	<b>0.00031</b>	mg/L	1	02/08/2018 11:57	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		<b>&lt; 4.81</b>	mg/Kg-dry	1	02/07/2018 23:30	138744
Arsenic	NELAP	0.94	2.36	X	<b>11.9</b>	mg/Kg-dry	1	02/07/2018 17:33	138730
Barium	NELAP	0.09	0.24		<b>134</b>	mg/Kg-dry	1	02/07/2018 17:33	138730
Beryllium	NELAP	0.03	0.05		<b>1.07</b>	mg/Kg-dry	1	02/07/2018 17:33	138730
Boron	NELAP	0.47	1.89		<b>8.21</b>	mg/Kg-dry	1	02/07/2018 17:33	138730
Cadmium	NELAP	0.05	0.19	J	<b>0.12</b>	mg/Kg-dry	1	02/07/2018 17:33	138730
Chromium	NELAP	0.19	0.47	X	<b>29.4</b>	mg/Kg-dry	1	02/07/2018 17:33	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-006

Client Sample ID: 2291V-3-B05 DUP

Matrix: SOLID

Collection Date: 02/01/2018 12:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Cobalt	NELAP	0.19	0.47		12.5	mg/Kg-dry	1	02/07/2018 17:33	138730
Copper	NELAP	0.14	0.47		27.2	mg/Kg-dry	1	02/07/2018 17:33	138730
Iron	NELAP	0.94	1.89	X	31200	mg/Kg-dry	1	02/07/2018 17:33	138730
Lead	NELAP	0.47	1.42		16.1	mg/Kg-dry	1	02/07/2018 17:33	138730
Magnesium	NELAP	0.38	4.72		4630	mg/Kg-dry	1	02/07/2018 17:33	138730
Manganese	NELAP	0.07	0.28	X	902	mg/Kg-dry	1	02/07/2018 17:33	138730
Nickel	NELAP	0.19	0.47		32.8	mg/Kg-dry	1	02/07/2018 17:33	138730
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/07/2018 17:33	138730
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/07/2018 17:33	138730
Vanadium	NELAP	0.19	0.94		54.4	mg/Kg-dry	1	02/07/2018 17:33	138730
Zinc	NELAP	0.38	0.94		59.2	mg/Kg-dry	1	02/07/2018 17:33	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/07/2018 16:33	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.041	mg/Kg-dry	1	02/06/2018 8:36	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.165	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
1,2-Dichlorobenzene	NELAP	0.197	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
1,3-Dichlorobenzene	NELAP	0.208	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
1,4-Dichlorobenzene	NELAP	0.197	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,4,5-Trichlorophenol	NELAP	0.136	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,4,6-Trichlorophenol	NELAP	0.156	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,4-Dichlorophenol	NELAP	0.150	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,4-Dimethylphenol	NELAP	0.157	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,4-Dinitrophenol	NELAP	0.133	1.24		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,4-Dinitrotoluene	NELAP	0.129	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2,6-Dinitrotoluene	NELAP	0.134	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2-Chloronaphthalene	NELAP	0.149	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2-Chlorophenol	NELAP	0.157	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2-Methylnaphthalene	NELAP	0.147	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2-Nitroaniline	NELAP	0.198	1.24		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
2-Nitrophenol	NELAP	0.139	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
3,3'-Dichlorobenzidine	NELAP	0.248	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
3-Nitroaniline	NELAP	0.186	1.24		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4,6-Dinitro-2-methylphenol	NELAP	0.134	1.24		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4-Bromophenyl phenyl ether	NELAP	0.114	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4-Chloro-3-methylphenol	NELAP	0.136	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4-Chloroaniline	NELAP	0.186	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4-Chlorophenyl phenyl ether	NELAP	0.123	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4-Nitroaniline	NELAP	0.186	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
4-Nitrophenol	NELAP	0.149	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-006

Client Sample ID: 2291V-3-B05 DUP

Matrix: SOLID

Collection Date: 02/01/2018 12:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Bis(2-chloroethoxy)methane	NELAP	0.145	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Bis(2-chloroethyl)ether	NELAP	0.176	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Bis(2-chloroisopropyl)ether	NELAP	0.141	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.145	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Butyl benzyl phthalate	NELAP	0.125	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Carbazole	NELAP	0.151	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Dibenzofuran	NELAP	0.186	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Diethyl phthalate	NELAP	0.119	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Dimethyl phthalate	NELAP	0.113	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Di-n-butyl phthalate	NELAP	0.128	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Di-n-octyl phthalate	NELAP	0.129	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Hexachlorobenzene	NELAP	0.207	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Hexachlorobutadiene	NELAP	0.192	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Hexachlorocyclopentadiene	NELAP	0.126	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Hexachloroethane	NELAP	0.207	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Isophorone	NELAP	0.146	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
m,p-Cresol	NELAP	0.156	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Nitrobenzene	NELAP	0.155	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
N-Nitroso-di-n-propylamine	NELAP	0.136	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
N-Nitrosodiphenylamine	NELAP	0.114	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
o-Cresol	NELAP	0.146	0.619		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Pentachlorophenol	NELAP	0.818	2.48		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Phenol	NELAP	0.144	0.434		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 12:49	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		66.0	%REC	1	02/09/2018 12:49	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		40.3	%REC	1	02/09/2018 12:49	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		43.5	%REC	1	02/09/2018 12:49	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		44.8	%REC	1	02/09/2018 12:49	138832
Surr: Phenol-d5	*	0	38.8-103		44.8	%REC	1	02/09/2018 12:49	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		73.7	%REC	1	02/09/2018 12:49	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
1,1,2-Trichloroethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
1,1-Dichloroethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
1,1-Dichloroethene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
1,2-Dichloroethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
1,2-Dichloropropane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-006

Client Sample ID: 2291V-3-B05 DUP

Matrix: SOLID

Collection Date: 02/01/2018 12:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,3-Dichloropropene, Total	*	0.00123	0.0049		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
2-Butanone	NELAP	0.154	0.246		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
2-Hexanone	NELAP	0.0123	0.0615		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
4-Methyl-2-pentanone	NELAP	0.0123	0.0615		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Acetone	NELAP	0.0203	0.0615		0.0884	mg/Kg-dry	1	02/06/2018 18:08	138747
Benzene	NELAP	0.00062	0.0012		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Bromodichloromethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Bromoform	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Bromomethane	NELAP	0.00308	0.0123		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Carbon disulfide	NELAP	0.00369	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Carbon tetrachloride	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Chlorobenzene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Chloroethane	NELAP	0.00246	0.0123		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Chloroform	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Chloromethane	NELAP	0.00246	0.0123		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
cis-1,2-Dichloroethene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
cis-1,3-Dichloropropene	NELAP	0.00123	0.0049		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Dibromochloromethane	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Ethylbenzene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
m,p-Xylenes	NELAP	0.00246	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Methyl tert-butyl ether	NELAP	0.00062	0.0025		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Methylene chloride	NELAP	0.00164	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
o-Xylene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Styrene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Tetrachloroethene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Toluene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
trans-1,2-Dichloroethene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
trans-1,3-Dichloropropene	NELAP	0.00123	0.0049		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Trichloroethene	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Vinyl acetate	NELAP	0.0246	0.0615		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Vinyl chloride	NELAP	0.00062	0.0025		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Xylenes, Total	NELAP	0.00123	0.0062		ND	mg/Kg-dry	1	02/06/2018 18:08	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		104.4	%REC	1	02/06/2018 18:08	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		95.4	%REC	1	02/06/2018 18:08	138747
Surr: Dibromofluoromethane	*	0	77.7-120		98.7	%REC	1	02/06/2018 18:08	138747
Surr: Toluene-d8	*	0	86-116		98.2	%REC	1	02/06/2018 18:08	138747

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-007

Client Sample ID: 2291V-3-B06

Matrix: SOLID

Collection Date: 02/01/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		22.2	%	1	02/07/2018 13:50	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		77.8	%	1	02/07/2018 13:50	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.29	J	0.23	mg/Kg-dry	1	02/08/2018 13:28	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.55		1	02/06/2018 18:06	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.719	mg/L	1	02/13/2018 13:15	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 13:15	138915
Manganese	NELAP	0.0016	0.0050		0.0314	mg/L	1	02/13/2018 13:15	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	0.0206	mg/L	1	02/08/2018 21:51	138773
Barium	NELAP	0.0024	0.0050		0.493	mg/L	1	02/08/2018 21:51	138773
Beryllium	NELAP	0.0003	0.0010		0.0026	mg/L	1	02/08/2018 21:51	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 21:51	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 21:51	138773
Chromium	NELAP	0.0040	0.0100		0.0611	mg/L	1	02/08/2018 21:51	138773
Cobalt	NELAP	0.0022	0.0100		0.0167	mg/L	1	02/08/2018 21:51	138773
Iron	NELAP	0.0450	0.0500	X	60.4	mg/L	1	02/08/2018 21:51	138773
Lead	NELAP	0.0060	0.0070	X	0.0561	mg/L	1	02/08/2018 21:51	138773
Manganese	NELAP	0.0016	0.0050	X	1.54	mg/L	1	02/08/2018 21:51	138773
Nickel	NELAP	0.0033	0.0100		0.0457	mg/L	1	02/08/2018 21:51	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 21:51	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 21:51	138773
Zinc	NELAP	0.0021	0.0100		0.180	mg/L	1	02/08/2018 21:51	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	02/08/2018 14:49	138774
Thallium	NELAP	0.0005	0.0010	J	0.0009	mg/L	5	02/09/2018 13:50	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00008	mg/L	1	02/08/2018 11:59	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		< 4.63	mg/Kg-dry	1	02/07/2018 23:36	138744
Arsenic	NELAP	0.91	2.27		8.43	mg/Kg-dry	1	02/07/2018 17:37	138730
Barium	NELAP	0.09	0.23		141	mg/Kg-dry	1	02/07/2018 17:37	138730
Beryllium	NELAP	0.03	0.05		0.80	mg/Kg-dry	1	02/07/2018 17:37	138730
Boron	NELAP	0.45	1.82		6.22	mg/Kg-dry	1	02/07/2018 17:37	138730
Cadmium	NELAP	0.05	0.18	J	0.10	mg/Kg-dry	1	02/07/2018 17:37	138730
Chromium	NELAP	0.18	0.45	X	21.4	mg/Kg-dry	1	02/07/2018 17:37	138730
Cobalt	NELAP	0.18	0.45		9.96	mg/Kg-dry	1	02/07/2018 17:37	138730
Copper	NELAP	0.14	0.45		14.2	mg/Kg-dry	1	02/07/2018 17:37	138730
Iron	NELAP	0.91	1.82	X	21800	mg/Kg-dry	1	02/07/2018 17:37	138730
Lead	NELAP	0.45	1.36		19.4	mg/Kg-dry	1	02/07/2018 17:37	138730
Magnesium	NELAP	0.36	4.55		3140	mg/Kg-dry	1	02/07/2018 17:37	138730
Manganese	NELAP	0.06	0.27	X	931	mg/Kg-dry	1	02/07/2018 17:37	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-007

Client Sample ID: 2291V-3-B06

Matrix: SOLID

Collection Date: 02/01/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Nickel	NELAP	0.18	0.45		17.3	mg/Kg-dry	1	02/07/2018 17:37	138730
Silver	NELAP	0.14	0.45		< 0.45	mg/Kg-dry	1	02/07/2018 17:37	138730
Thallium	NELAP	1.36	2.36		< 2.36	mg/Kg-dry	1	02/07/2018 17:37	138730
Vanadium	NELAP	0.18	0.91		41.8	mg/Kg-dry	1	02/07/2018 17:37	138730
Zinc	NELAP	0.36	0.91		57.7	mg/Kg-dry	1	02/07/2018 17:37	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.36	0.91	J	0.55	mg/Kg-dry	10	02/07/2018 16:41	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.048	mg/Kg-dry	1	02/06/2018 8:38	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.167	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
1,2-Dichlorobenzene	NELAP	0.200	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
1,3-Dichlorobenzene	NELAP	0.211	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
1,4-Dichlorobenzene	NELAP	0.200	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,4,5-Trichlorophenol	NELAP	0.138	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,4,6-Trichlorophenol	NELAP	0.158	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,4-Dichlorophenol	NELAP	0.152	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,4-Dimethylphenol	NELAP	0.159	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,4-Dinitrotoluene	NELAP	0.130	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2,6-Dinitrotoluene	NELAP	0.136	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2-Chloronaphthalene	NELAP	0.151	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2-Chlorophenol	NELAP	0.159	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2-Methylnaphthalene	NELAP	0.149	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2-Nitroaniline	NELAP	0.201	1.25		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
2-Nitrophenol	NELAP	0.141	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
3,3'-Dichlorobenzidine	NELAP	0.251	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
3-Nitroaniline	NELAP	0.188	1.25		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4,6-Dinitro-2-methylphenol	NELAP	0.136	1.25		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4-Bromophenyl phenyl ether	NELAP	0.115	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4-Chloro-3-methylphenol	NELAP	0.138	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4-Chloroaniline	NELAP	0.188	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4-Chlorophenyl phenyl ether	NELAP	0.124	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4-Nitroaniline	NELAP	0.188	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
4-Nitrophenol	NELAP	0.151	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Bis(2-chloroethoxy)methane	NELAP	0.147	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Bis(2-chloroethyl)ether	NELAP	0.178	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Bis(2-chloroisopropyl)ether	NELAP	0.143	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.147	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832





# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-007

Client Sample ID: 2291V-3-B06

Matrix: SOLID

Collection Date: 02/01/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Butyl benzyl phthalate	NELAP	0.127	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Carbazole	NELAP	0.153	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Dibenzofuran	NELAP	0.188	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Diethyl phthalate	NELAP	0.120	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Dimethyl phthalate	NELAP	0.114	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Di-n-butyl phthalate	NELAP	0.129	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Di-n-octyl phthalate	NELAP	0.130	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Hexachlorobenzene	NELAP	0.210	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Hexachlorobutadiene	NELAP	0.194	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Hexachlorocyclopentadiene	NELAP	0.128	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Hexachloroethane	NELAP	0.210	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Isophorone	NELAP	0.148	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
m,p-Cresol	NELAP	0.158	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Nitrobenzene	NELAP	0.157	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
N-Nitroso-di-n-propylamine	NELAP	0.138	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
N-Nitrosodiphenylamine	NELAP	0.115	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
o-Cresol	NELAP	0.148	0.627		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Pentachlorophenol	NELAP	0.828	2.51		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Phenol	NELAP	0.146	0.439		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:25	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		60.5	%REC	1	02/09/2018 19:25	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		45.8	%REC	1	02/09/2018 19:25	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		45.2	%REC	1	02/09/2018 19:25	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		48.6	%REC	1	02/09/2018 19:25	138832
Surr: Phenol-d5	*	0	38.8-103		49.1	%REC	1	02/09/2018 19:25	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		63.8	%REC	1	02/09/2018 19:25	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,1,2,2-Tetrachloroethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,1,2-Trichloroethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,1-Dichloroethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,1-Dichloroethene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,2-Dichloroethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,2-Dichloropropane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
1,3-Dichloropropene, Total	*	0.0252	0.101		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
2-Butanone	NELAP	3.15	5.05		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
2-Hexanone	NELAP	0.252	1.26		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
4-Methyl-2-pentanone	NELAP	0.252	1.26		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Acetone	NELAP	0.416	1.26		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Benzene	NELAP	0.0126	0.0252		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-007

Client Sample ID: 2291V-3-B06

Matrix: SOLID

Collection Date: 02/01/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromodichloromethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Bromoform	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Bromomethane	NELAP	0.0631	0.252		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Carbon disulfide	NELAP	0.0757	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Carbon tetrachloride	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Chlorobenzene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Chloroethane	NELAP	0.0505	0.252		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Chloroform	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Chloromethane	NELAP	0.0505	0.252		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
cis-1,2-Dichloroethene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
cis-1,3-Dichloropropene	NELAP	0.0252	0.101		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Dibromochloromethane	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Ethylbenzene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
m,p-Xylenes	NELAP	0.0505	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Methyl tert-butyl ether	NELAP	0.0126	0.0505		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Methylene chloride	NELAP	0.0336	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
o-Xylene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Styrene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Tetrachloroethene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Toluene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
trans-1,2-Dichloroethene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
trans-1,3-Dichloropropene	NELAP	0.0252	0.101		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Trichloroethene	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Vinyl acetate	NELAP	0.505	1.26		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Vinyl chloride	NELAP	0.0126	0.0505		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Xylenes, Total	NELAP	0.0252	0.126		ND	mg/Kg-dry	12.5	02/08/2018 11:36	138831
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>92.6</b>	%REC	12.5	02/08/2018 11:36	138831
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>97.0</b>	%REC	12.5	02/08/2018 11:36	138831
Surr: Dibromofluoromethane	*	0	77.7-120		<b>95.1</b>	%REC	12.5	02/08/2018 11:36	138831
Surr: Toluene-d8	*	0	86-116		<b>101.1</b>	%REC	12.5	02/08/2018 11:36	138831

*Elevated reporting limit due to matrix interference.*

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-011

Client Sample ID: 2291V-3-B09

Matrix: SOLID

Collection Date: 02/01/2018 12:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.0	%	1	02/07/2018 13:51	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		79.0	%	1	02/07/2018 13:51	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30	J	0.25	mg/Kg-dry	1	02/08/2018 13:50	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.10		1	02/05/2018 21:18	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Beryllium	NELAP	0.0003	0.0010		< 0.0010	mg/L	1	02/13/2018 13:26	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 13:26	138915
Iron	NELAP	0.0070	0.0200		0.519	mg/L	1	02/13/2018 13:26	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 13:26	138915
Manganese	NELAP	0.0016	0.0050		0.108	mg/L	1	02/13/2018 13:26	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		0.0411	mg/L	1	02/08/2018 22:09	138773
Barium	NELAP	0.0024	0.0050		0.672	mg/L	1	02/08/2018 22:09	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0043	mg/L	1	02/08/2018 22:09	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 22:09	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 22:09	138773
Chromium	NELAP	0.0040	0.0100	X	0.110	mg/L	1	02/08/2018 22:09	138773
Cobalt	NELAP	0.0022	0.0100		0.0238	mg/L	1	02/08/2018 22:09	138773
Iron	NELAP	0.0450	0.0500	X	118	mg/L	1	02/08/2018 22:09	138773
Lead	NELAP	0.0060	0.0070	X	0.0624	mg/L	1	02/08/2018 22:09	138773
Manganese	NELAP	0.0016	0.0050	X	2.00	mg/L	1	02/08/2018 22:09	138773
Nickel	NELAP	0.0033	0.0100		0.0932	mg/L	1	02/08/2018 22:09	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 22:09	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 22:09	138773
Zinc	NELAP	0.0021	0.0100		0.266	mg/L	1	02/08/2018 22:09	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0007	mg/L	5	02/08/2018 15:14	138774
Thallium	NELAP	0.0005	0.0010		0.0014	mg/L	5	02/09/2018 14:39	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100		< 0.00100	mg/L	1	02/08/2018 12:15	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.50	5.00		< 5.00	mg/Kg-dry	1	02/08/2018 0:17	138744
Arsenic	NELAP	0.96	2.40	X	12.8	mg/Kg-dry	1	02/07/2018 18:10	138730
Barium	NELAP	0.10	0.24		135	mg/Kg-dry	1	02/07/2018 18:10	138730
Beryllium	NELAP	0.03	0.05		1.07	mg/Kg-dry	1	02/07/2018 18:10	138730
Boron	NELAP	0.48	1.92		8.11	mg/Kg-dry	1	02/07/2018 18:10	138730
Cadmium	NELAP	0.05	0.19	J	0.12	mg/Kg-dry	1	02/07/2018 18:10	138730
Chromium	NELAP	0.19	0.48	X	29.1	mg/Kg-dry	1	02/07/2018 18:10	138730
Cobalt	NELAP	0.19	0.48		12.4	mg/Kg-dry	1	02/07/2018 18:10	138730
Copper	NELAP	0.14	0.48		26.1	mg/Kg-dry	1	02/07/2018 18:10	138730
Iron	NELAP	0.96	1.92	X	31600	mg/Kg-dry	1	02/07/2018 18:10	138730
Lead	NELAP	0.48	1.44		16.8	mg/Kg-dry	1	02/07/2018 18:10	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-011

Client Sample ID: 2291V-3-B09

Matrix: SOLID

Collection Date: 02/01/2018 12:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Magnesium	NELAP	0.38	4.81		5100	mg/Kg-dry	1	02/07/2018 18:10	138730
Manganese	NELAP	0.07	0.29	X	937	mg/Kg-dry	1	02/07/2018 18:10	138730
Nickel	NELAP	0.19	0.48		31.8	mg/Kg-dry	1	02/07/2018 18:10	138730
Silver	NELAP	0.14	0.48		< 0.48	mg/Kg-dry	1	02/07/2018 18:10	138730
Thallium	NELAP	1.44	2.50		< 2.50	mg/Kg-dry	1	02/07/2018 18:10	138730
Vanadium	NELAP	0.19	0.96		57.2	mg/Kg-dry	1	02/07/2018 18:10	138730
Zinc	NELAP	0.38	0.96		61.4	mg/Kg-dry	1	02/07/2018 18:10	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.96		< 0.96	mg/Kg-dry	10	02/07/2018 17:47	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.043	mg/Kg-dry	1	02/06/2018 8:58	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
1,2-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
1,3-Dichlorobenzene	NELAP	0.210	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
1,4-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,4,5-Trichlorophenol	NELAP	0.137	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,4,6-Trichlorophenol	NELAP	0.157	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,4-Dichlorophenol	NELAP	0.151	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,4-Dimethylphenol	NELAP	0.158	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,4-Dinitrophenol	NELAP	0.133	1.25		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,4-Dinitrotoluene	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2,6-Dinitrotoluene	NELAP	0.135	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2-Chloronaphthalene	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2-Chlorophenol	NELAP	0.158	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2-Methylnaphthalene	NELAP	0.148	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
2-Nitrophenol	NELAP	0.140	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
3,3'-Dichlorobenzidine	NELAP	0.249	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
3-Nitroaniline	NELAP	0.187	1.25		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4-Bromophenyl phenyl ether	NELAP	0.115	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4-Chloro-3-methylphenol	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4-Chloroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4-Chlorophenyl phenyl ether	NELAP	0.123	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4-Nitroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
4-Nitrophenol	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Bis(2-chloroethoxy)methane	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Bis(2-chloroethyl)ether	NELAP	0.177	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-011

Client Sample ID: 2291V-3-B09

Matrix: SOLID

Collection Date: 02/01/2018 12:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-chloroisopropyl)ether	NELAP	0.142	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Butyl benzyl phthalate	NELAP	0.126	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Carbazole	NELAP	0.152	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Dibenzofuran	NELAP	0.187	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Diethyl phthalate	NELAP	0.120	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Dimethyl phthalate	NELAP	0.113	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Di-n-butyl phthalate	NELAP	0.128	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Di-n-octyl phthalate	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Hexachlorobenzene	NELAP	0.208	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Hexachlorobutadiene	NELAP	0.193	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Hexachlorocyclopentadiene	NELAP	0.127	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Hexachloroethane	NELAP	0.208	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Isophorone	NELAP	0.147	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
m,p-Cresol	NELAP	0.157	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Nitrobenzene	NELAP	0.156	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
N-Nitroso-di-n-propylamine	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
N-Nitrosodiphenylamine	NELAP	0.115	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
o-Cresol	NELAP	0.147	0.624		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Pentachlorophenol	NELAP	0.823	2.49		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Phenol	NELAP	0.145	0.437		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 17:14	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		64.0	%REC	1	02/09/2018 17:14	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		41.1	%REC	1	02/09/2018 17:14	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		39.0	%REC	1	02/09/2018 17:14	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		41.5	%REC	1	02/09/2018 17:14	138832
Surr: Phenol-d5	*	0	38.8-103		43.1	%REC	1	02/09/2018 17:14	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		67.5	%REC	1	02/09/2018 17:14	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,1,2-Trichloroethane	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,1-Dichloroethane	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,1-Dichloroethene	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,2-Dichloroethane	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,2-Dichloropropane	NELAP	0.00096	0.0048		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
1,3-Dichloropropene, Total	*	0.00096	0.0038		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
2-Butanone	NELAP	0.120	0.192		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
2-Hexanone	NELAP	0.00959	0.0480		ND	mg/Kg-dry	1	02/06/2018 15:32	138748
4-Methyl-2-pentanone	NELAP	0.00959	0.0480		ND	mg/Kg-dry	1	02/06/2018 15:32	138748



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-011

Client Sample ID: 2291V-3-B09

Matrix: SOLID

Collection Date: 02/01/2018 12:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Acetone	NELAP	0.0158	0.0480		<b>0.0955</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Benzene	NELAP	0.00048	0.0010		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Bromodichloromethane	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Bromoform	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Bromomethane	NELAP	0.00240	0.0096		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Carbon disulfide	NELAP	0.00288	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Carbon tetrachloride	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Chlorobenzene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Chloroethane	NELAP	0.00192	0.0096		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Chloroform	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Chloromethane	NELAP	0.00192	0.0096		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
cis-1,2-Dichloroethene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
cis-1,3-Dichloropropene	NELAP	0.00096	0.0038		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Dibromochloromethane	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Ethylbenzene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
m,p-Xylenes	NELAP	0.00192	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Methyl tert-butyl ether	NELAP	0.00048	0.0019		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Methylene chloride	NELAP	0.00128	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
o-Xylene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Styrene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Tetrachloroethene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Toluene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
trans-1,2-Dichloroethene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
trans-1,3-Dichloropropene	NELAP	0.00096	0.0038		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Trichloroethene	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Vinyl acetate	NELAP	0.0192	0.0480		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Vinyl chloride	NELAP	0.00048	0.0019		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Xylenes, Total	NELAP	0.00096	0.0048		<b>ND</b>	mg/Kg-dry	1	02/06/2018 15:32	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>114.7</b>	%REC	1	02/06/2018 15:32	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>101.6</b>	%REC	1	02/06/2018 15:32	138748
Surr: Dibromofluoromethane	*	0	77.7-120		<b>105.8</b>	%REC	1	02/06/2018 15:32	138748
Surr: Toluene-d8	*	0	86-116		<b>93.1</b>	%REC	1	02/06/2018 15:32	138748

*LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-012

Client Sample ID: 2291V-3-B10

Matrix: SOLID

Collection Date: 02/01/2018 11:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		19.6	%	1	02/07/2018 13:51	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		80.4	%	1	02/07/2018 13:51	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.31		< 0.31	mg/Kg-dry	1	02/08/2018 13:54	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.18		1	02/05/2018 21:20	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/13/2018 13:30	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 13:30	138915
Iron	NELAP	0.0070	0.0200		0.183	mg/L	1	02/13/2018 13:30	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 13:30	138915
Manganese	NELAP	0.0016	0.0050		0.0336	mg/L	1	02/13/2018 13:30	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		0.0444	mg/L	1	02/08/2018 22:13	138773
Barium	NELAP	0.0024	0.0050		0.445	mg/L	1	02/08/2018 22:13	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0043	mg/L	1	02/08/2018 22:13	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 22:13	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 22:13	138773
Chromium	NELAP	0.0040	0.0100	X	0.108	mg/L	1	02/08/2018 22:13	138773
Cobalt	NELAP	0.0022	0.0100		0.0221	mg/L	1	02/08/2018 22:13	138773
Iron	NELAP	0.0450	0.0500	X	117	mg/L	1	02/08/2018 22:13	138773
Lead	NELAP	0.0060	0.0070	X	0.0489	mg/L	1	02/08/2018 22:13	138773
Manganese	NELAP	0.0016	0.0050	X	1.68	mg/L	1	02/08/2018 22:13	138773
Nickel	NELAP	0.0033	0.0100		0.0982	mg/L	1	02/08/2018 22:13	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 22:13	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 22:13	138773
Zinc	NELAP	0.0021	0.0100		0.200	mg/L	1	02/08/2018 22:13	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	02/08/2018 15:22	138774
Thallium	NELAP	0.0005	0.0010		0.0013	mg/L	5	02/09/2018 14:47	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100		< 0.00100	mg/L	1	02/08/2018 12:17	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.47	4.90		< 4.90	mg/Kg-dry	1	02/08/2018 0:23	138744
Arsenic	NELAP	0.93	2.31	X	12.4	mg/Kg-dry	1	02/07/2018 18:13	138730
Barium	NELAP	0.09	0.23		102	mg/Kg-dry	1	02/07/2018 18:13	138730
Beryllium	NELAP	0.03	0.05		1.04	mg/Kg-dry	1	02/07/2018 18:13	138730
Boron	NELAP	0.46	1.85		6.91	mg/Kg-dry	1	02/07/2018 18:13	138730
Cadmium	NELAP	0.05	0.19	J	0.10	mg/Kg-dry	1	02/07/2018 18:13	138730
Chromium	NELAP	0.19	0.46	X	28.9	mg/Kg-dry	1	02/07/2018 18:13	138730
Cobalt	NELAP	0.19	0.46		11.7	mg/Kg-dry	1	02/07/2018 18:13	138730
Copper	NELAP	0.14	0.46		21.6	mg/Kg-dry	1	02/07/2018 18:13	138730
Iron	NELAP	0.93	1.85	X	31400	mg/Kg-dry	1	02/07/2018 18:13	138730
Lead	NELAP	0.46	1.39		15.2	mg/Kg-dry	1	02/07/2018 18:13	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-012

Client Sample ID: 2291V-3-B10

Matrix: SOLID

Collection Date: 02/01/2018 11:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Magnesium	NELAP	0.37	4.63		4530	mg/Kg-dry	1	02/07/2018 18:13	138730
Manganese	NELAP	0.06	0.28	X	836	mg/Kg-dry	1	02/07/2018 18:13	138730
Nickel	NELAP	0.19	0.46		28.0	mg/Kg-dry	1	02/07/2018 18:13	138730
Silver	NELAP	0.14	0.46		< 0.46	mg/Kg-dry	1	02/07/2018 18:13	138730
Thallium	NELAP	1.39	2.41		< 2.41	mg/Kg-dry	1	02/07/2018 18:13	138730
Vanadium	NELAP	0.19	0.93		56.8	mg/Kg-dry	1	02/07/2018 18:13	138730
Zinc	NELAP	0.37	0.93		55.6	mg/Kg-dry	1	02/07/2018 18:13	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.37	0.93		< 0.93	mg/Kg-dry	10	02/07/2018 17:55	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.038	mg/Kg-dry	1	02/06/2018 9:00	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.329	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
1,2-Dichlorobenzene	NELAP	0.394	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
1,3-Dichlorobenzene	NELAP	0.416	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
1,4-Dichlorobenzene	NELAP	0.394	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,4,5-Trichlorophenol	NELAP	0.272	0.866	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,4,6-Trichlorophenol	NELAP	0.312	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,4-Dichlorophenol	NELAP	0.299	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,4-Dimethylphenol	NELAP	0.314	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,4-Dinitrophenol	NELAP	0.265	2.47		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,4-Dinitrotoluene	NELAP	0.257	0.866	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2,6-Dinitrotoluene	NELAP	0.267	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2-Chloronaphthalene	NELAP	0.297	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2-Chlorophenol	NELAP	0.314	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2-Methylnaphthalene	NELAP	0.295	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2-Nitroaniline	NELAP	0.396	2.47		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
2-Nitrophenol	NELAP	0.277	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
3,3'-Dichlorobenzidine	NELAP	0.495	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
3-Nitroaniline	NELAP	0.371	2.47		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4,6-Dinitro-2-methylphenol	NELAP	0.267	2.47		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4-Bromophenyl phenyl ether	NELAP	0.228	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4-Chloro-3-methylphenol	NELAP	0.272	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4-Chloroaniline	NELAP	0.371	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4-Chlorophenyl phenyl ether	NELAP	0.245	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4-Nitroaniline	NELAP	0.371	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
4-Nitrophenol	NELAP	0.297	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Acenaphthene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Acenaphthylene	NELAP	0.041	0.084	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Anthracene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Benzo(a)anthracene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Benzo(a)pyrene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Benzo(b)fluoranthene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Benzo(g,h,i)perylene	NELAP	0.041	0.084	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Benzo(k)fluoranthene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Bis(2-chloroethoxy)methane	NELAP	0.290	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Bis(2-chloroethyl)ether	NELAP	0.351	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832





# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-012

Client Sample ID: 2291V-3-B10

Matrix: SOLID

Collection Date: 02/01/2018 11:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-chloroisopropyl)ether	NELAP	0.282	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.290	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Butyl benzyl phthalate	NELAP	0.250	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Carbazole	NELAP	0.302	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Chrysene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Dibenzo(a,h)anthracene	NELAP	0.041	0.084	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Dibenzofuran	NELAP	0.371	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Diethyl phthalate	NELAP	0.238	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Dimethyl phthalate	NELAP	0.225	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Di-n-butyl phthalate	NELAP	0.255	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Di-n-octyl phthalate	NELAP	0.257	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Fluoranthene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Fluorene	NELAP	0.041	0.084	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Hexachlorobenzene	NELAP	0.413	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Hexachlorobutadiene	NELAP	0.384	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Hexachlorocyclopentadiene	NELAP	0.252	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Hexachloroethane	NELAP	0.413	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.041	0.084	S	ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Isophorone	NELAP	0.292	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
m,p-Cresol	NELAP	0.312	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Naphthalene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Nitrobenzene	NELAP	0.309	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
N-Nitroso-di-n-propylamine	NELAP	0.272	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
N-Nitrosodiphenylamine	NELAP	0.228	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
o-Cresol	NELAP	0.292	1.24		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Pentachlorophenol	NELAP	1.63	4.95		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Phenanthrene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Phenol	NELAP	0.287	0.866		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Pyrene	NELAP	0.041	0.084		ND	mg/Kg-dry	1	02/09/2018 17:47	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		65.5	%REC	1	02/09/2018 17:47	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		47.9	%REC	1	02/09/2018 17:47	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		48.9	%REC	1	02/09/2018 17:47	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		51.2	%REC	1	02/09/2018 17:47	138832
Surr: Phenol-d5	*	0	38.8-103		52.3	%REC	1	02/09/2018 17:47	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		74.1	%REC	1	02/09/2018 17:47	138832

Matrix spike did not recover within control limits due to sample composition.

Elevated reporting limit due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,1,2-Trichloroethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,1-Dichloroethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,1-Dichloroethene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,2-Dichloroethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,2-Dichloropropane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
1,3-Dichloropropene, Total	*	0.00115	0.0046		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
2-Butanone	NELAP	0.144	0.231		ND	mg/Kg-dry	1	02/06/2018 15:58	138748



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-012

Client Sample ID: 2291V-3-B10

Matrix: SOLID

Collection Date: 02/01/2018 11:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
2-Hexanone	NELAP	0.0115	0.0577		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
4-Methyl-2-pentanone	NELAP	0.0115	0.0577		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Acetone	NELAP	0.0190	0.0577		0.124	mg/Kg-dry	1	02/06/2018 15:58	138748
Benzene	NELAP	0.00058	0.0012		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Bromodichloromethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Bromoform	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Bromomethane	NELAP	0.00289	0.0115		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Carbon disulfide	NELAP	0.00346	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Carbon tetrachloride	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Chlorobenzene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Chloroethane	NELAP	0.00231	0.0115		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Chloroform	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Chloromethane	NELAP	0.00231	0.0115		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
cis-1,2-Dichloroethene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
cis-1,3-Dichloropropene	NELAP	0.00115	0.0046		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Dibromochloromethane	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Ethylbenzene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
m,p-Xylenes	NELAP	0.00231	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Methyl tert-butyl ether	NELAP	0.00058	0.0023		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Methylene chloride	NELAP	0.00153	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
o-Xylene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Styrene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Tetrachloroethene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Toluene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
trans-1,2-Dichloroethene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
trans-1,3-Dichloropropene	NELAP	0.00115	0.0046		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Trichloroethene	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Vinyl acetate	NELAP	0.0231	0.0577		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Vinyl chloride	NELAP	0.00058	0.0023		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Xylenes, Total	NELAP	0.00115	0.0058		ND	mg/Kg-dry	1	02/06/2018 15:58	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.0	%REC	1	02/06/2018 15:58	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		105.0	%REC	1	02/06/2018 15:58	138748
Surr: Dibromofluoromethane	*	0	77.7-120		107.1	%REC	1	02/06/2018 15:58	138748
Surr: Toluene-d8	*	0	86-116		94.7	%REC	1	02/06/2018 15:58	138748

LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-013

Client Sample ID: 2291V-3-B11

Matrix: SOLID

Collection Date: 02/01/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.2	%	1	02/07/2018 13:51	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.8	%	1	02/07/2018 13:51	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.29	J	0.20	mg/Kg-dry	1	02/08/2018 14:11	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.09		1	02/06/2018 18:12	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Beryllium	NELAP	0.0003	0.0010		< 0.0010	mg/L	1	02/13/2018 13:34	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 13:34	138915
Iron	NELAP	0.0070	0.0200		0.128	mg/L	1	02/13/2018 13:34	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 13:34	138915
Manganese	NELAP	0.0016	0.0050		0.0868	mg/L	1	02/13/2018 13:34	138915
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 13:34	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		0.0474	mg/L	1	02/08/2018 22:17	138773
Barium	NELAP	0.0024	0.0050		0.703	mg/L	1	02/08/2018 22:17	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0048	mg/L	1	02/08/2018 22:17	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 22:17	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 22:17	138773
Chromium	NELAP	0.0040	0.0100	X	0.133	mg/L	1	02/08/2018 22:17	138773
Cobalt	NELAP	0.0022	0.0100		0.0262	mg/L	1	02/08/2018 22:17	138773
Iron	NELAP	0.0450	0.0500	X	136	mg/L	1	02/08/2018 22:17	138773
Lead	NELAP	0.0060	0.0070	X	0.0800	mg/L	1	02/08/2018 22:17	138773
Manganese	NELAP	0.0016	0.0050	X	1.83	mg/L	1	02/08/2018 22:17	138773
Nickel	NELAP	0.0033	0.0100	X	0.105	mg/L	1	02/08/2018 22:17	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 22:17	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 22:17	138773
Zinc	NELAP	0.0021	0.0100		0.302	mg/L	1	02/08/2018 22:17	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	02/08/2018 15:30	138774
Thallium	NELAP	0.0005	0.0010		0.0016	mg/L	5	02/09/2018 14:55	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00011	mg/L	1	02/08/2018 12:19	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.36	4.55	J	1.71	mg/Kg-dry	1	02/08/2018 0:29	138744
Arsenic	NELAP	1.00	2.50	X	12.1	mg/Kg-dry	1	02/07/2018 18:17	138730
Barium	NELAP	0.10	0.25		139	mg/Kg-dry	1	02/07/2018 18:17	138730
Beryllium	NELAP	0.03	0.05		1.08	mg/Kg-dry	1	02/07/2018 18:17	138730
Boron	NELAP	0.50	2.00		7.45	mg/Kg-dry	1	02/07/2018 18:17	138730
Cadmium	NELAP	0.05	0.20	J	0.11	mg/Kg-dry	1	02/07/2018 18:17	138730
Chromium	NELAP	0.20	0.50	X	30.9	mg/Kg-dry	1	02/07/2018 18:17	138730
Cobalt	NELAP	0.20	0.50		12.5	mg/Kg-dry	1	02/07/2018 18:17	138730
Copper	NELAP	0.15	0.50		22.2	mg/Kg-dry	1	02/07/2018 18:17	138730
Iron	NELAP	1.00	2.00	X	30200	mg/Kg-dry	1	02/07/2018 18:17	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-013

Client Sample ID: 2291V-3-B11

Matrix: SOLID

Collection Date: 02/01/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Lead	NELAP	0.50	1.50		16.1	mg/Kg-dry	1	02/07/2018 18:17	138730
Magnesium	NELAP	0.40	5.00		5030	mg/Kg-dry	1	02/07/2018 18:17	138730
Manganese	NELAP	0.07	0.30	X	906	mg/Kg-dry	1	02/07/2018 18:17	138730
Nickel	NELAP	0.20	0.50		27.5	mg/Kg-dry	1	02/07/2018 18:17	138730
Silver	NELAP	0.15	0.50		< 0.50	mg/Kg-dry	1	02/07/2018 18:17	138730
Thallium	NELAP	1.50	2.60		< 2.60	mg/Kg-dry	1	02/07/2018 18:17	138730
Vanadium	NELAP	0.20	1.00		59.1	mg/Kg-dry	1	02/07/2018 18:17	138730
Zinc	NELAP	0.40	1.00		60.9	mg/Kg-dry	1	02/07/2018 18:17	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00	J	0.54	mg/Kg-dry	10	02/07/2018 18:03	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.033	mg/Kg-dry	1	02/06/2018 9:02	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
1,2-Dichlorobenzene	NELAP	0.199	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
1,3-Dichlorobenzene	NELAP	0.210	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
1,4-Dichlorobenzene	NELAP	0.199	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,4,5-Trichlorophenol	NELAP	0.138	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,4,6-Trichlorophenol	NELAP	0.158	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,4-Dichlorophenol	NELAP	0.151	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,4-Dimethylphenol	NELAP	0.159	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,4-Dinitrotoluene	NELAP	0.130	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2,6-Dinitrotoluene	NELAP	0.135	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2-Chloronaphthalene	NELAP	0.150	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2-Chlorophenol	NELAP	0.159	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2-Methylnaphthalene	NELAP	0.149	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
2-Nitrophenol	NELAP	0.140	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
3,3'-Dichlorobenzidine	NELAP	0.250	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
3-Nitroaniline	NELAP	0.188	1.25		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4-Bromophenyl phenyl ether	NELAP	0.115	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4-Chloro-3-methylphenol	NELAP	0.138	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4-Chloroaniline	NELAP	0.188	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4-Chlorophenyl phenyl ether	NELAP	0.124	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4-Nitroaniline	NELAP	0.188	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
4-Nitrophenol	NELAP	0.150	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Bis(2-chloroethoxy)methane	NELAP	0.146	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-013

Client Sample ID: 2291V-3-B11

Matrix: SOLID

Collection Date: 02/01/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-chloroethyl)ether	NELAP	0.178	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Bis(2-chloroisopropyl)ether	NELAP	0.143	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Butyl benzyl phthalate	NELAP	0.126	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Carbazole	NELAP	0.153	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Dibenzofuran	NELAP	0.188	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Diethyl phthalate	NELAP	0.120	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Dimethyl phthalate	NELAP	0.114	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Di-n-butyl phthalate	NELAP	0.129	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Di-n-octyl phthalate	NELAP	0.130	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Hexachlorobenzene	NELAP	0.209	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Hexachlorobutadiene	NELAP	0.194	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Hexachlorocyclopentadiene	NELAP	0.128	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Hexachloroethane	NELAP	0.209	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Isophorone	NELAP	0.148	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
m,p-Cresol	NELAP	0.158	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Nitrobenzene	NELAP	0.156	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
N-Nitroso-di-n-propylamine	NELAP	0.138	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
N-Nitrosodiphenylamine	NELAP	0.115	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
o-Cresol	NELAP	0.148	0.626		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Pentachlorophenol	NELAP	0.826	2.50		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Phenol	NELAP	0.145	0.438		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 23:26	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		64.4	%REC	1	02/09/2018 23:26	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		53.3	%REC	1	02/09/2018 23:26	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		54.4	%REC	1	02/09/2018 23:26	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		46.6	%REC	1	02/09/2018 23:26	138832
Surr: Phenol-d5	*	0	38.8-103		52.7	%REC	1	02/09/2018 23:26	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		59.8	%REC	1	02/09/2018 23:26	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,1,2-Trichloroethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,1-Dichloroethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,1-Dichloroethene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,2-Dichloroethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,2-Dichloropropane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
1,3-Dichloropropene, Total	*	0.00124	0.0050		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
2-Butanone	NELAP	0.155	0.248		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
2-Hexanone	NELAP	0.0124	0.0619		ND	mg/Kg-dry	1	02/06/2018 16:24	138748



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-013

Client Sample ID: 2291V-3-B11

Matrix: SOLID

Collection Date: 02/01/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
4-Methyl-2-pentanone	NELAP	0.0124	0.0619		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Acetone	NELAP	0.0204	0.0619		0.155	mg/Kg-dry	1	02/06/2018 16:24	138748
Benzene	NELAP	0.00062	0.0012		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Bromodichloromethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Bromoform	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Bromomethane	NELAP	0.00310	0.0124		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Carbon disulfide	NELAP	0.00372	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Carbon tetrachloride	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Chlorobenzene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Chloroethane	NELAP	0.00248	0.0124		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Chloroform	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Chloromethane	NELAP	0.00248	0.0124		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
cis-1,2-Dichloroethene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
cis-1,3-Dichloropropene	NELAP	0.00124	0.0050		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Dibromochloromethane	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Ethylbenzene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
m,p-Xylenes	NELAP	0.00248	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Methyl tert-butyl ether	NELAP	0.00062	0.0025		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Methylene chloride	NELAP	0.00165	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
o-Xylene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Styrene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Tetrachloroethene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Toluene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
trans-1,2-Dichloroethene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
trans-1,3-Dichloropropene	NELAP	0.00124	0.0050		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Trichloroethene	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Vinyl acetate	NELAP	0.0248	0.0619		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Vinyl chloride	NELAP	0.00062	0.0025		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Xylenes, Total	NELAP	0.00124	0.0062		ND	mg/Kg-dry	1	02/06/2018 16:24	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.9	%REC	1	02/06/2018 16:24	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		100.5	%REC	1	02/06/2018 16:24	138748
Surr: Dibromofluoromethane	*	0	77.7-120		103.3	%REC	1	02/06/2018 16:24	138748
Surr: Toluene-d8	*	0	86-116		93.1	%REC	1	02/06/2018 16:24	138748

LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-014

Client Sample ID: 2291V-3-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.2	%	1	02/07/2018 13:51	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.8	%	1	02/07/2018 13:51	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.31	J	0.14	mg/Kg-dry	1	02/08/2018 14:51	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.86		1	02/06/2018 18:19	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 13:38	138915
Beryllium	NELAP	0.0003	0.0010	J	0.0003	mg/L	1	02/13/2018 13:38	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 13:38	138915
Iron	NELAP	0.0070	0.0200		0.441	mg/L	1	02/13/2018 13:38	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 13:38	138915
Manganese	NELAP	0.0016	0.0050		0.0238	mg/L	1	02/13/2018 13:38	138915
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 13:38	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0514	mg/L	1	02/08/2018 22:31	138773
Barium	NELAP	0.0024	0.0050		0.836	mg/L	1	02/08/2018 22:31	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0056	mg/L	1	02/08/2018 22:31	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 22:31	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 22:31	138773
Chromium	NELAP	0.0040	0.0100	X	0.151	mg/L	1	02/08/2018 22:31	138773
Cobalt	NELAP	0.0022	0.0100		0.0340	mg/L	1	02/08/2018 22:31	138773
Iron	NELAP	0.0450	0.0500	X	155	mg/L	1	02/08/2018 22:31	138773
Lead	NELAP	0.0060	0.0070	X	0.0627	mg/L	1	02/08/2018 22:31	138773
Manganese	NELAP	0.0016	0.0050	X	2.38	mg/L	1	02/08/2018 22:31	138773
Nickel	NELAP	0.0033	0.0100	X	0.123	mg/L	1	02/08/2018 22:31	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 22:31	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 22:31	138773
Zinc	NELAP	0.0021	0.0100		0.294	mg/L	1	02/08/2018 22:31	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0008	mg/L	5	02/08/2018 15:39	138774
Thallium	NELAP	0.0005	0.0010		0.0017	mg/L	5	02/09/2018 15:04	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00025	mg/L	1	02/08/2018 12:22	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		< 4.81	mg/Kg-dry	1	02/08/2018 0:35	138744
Arsenic	NELAP	0.98	2.45	X	11.9	mg/Kg-dry	1	02/07/2018 18:21	138730
Barium	NELAP	0.10	0.25		140	mg/Kg-dry	1	02/07/2018 18:21	138730
Beryllium	NELAP	0.03	0.05		1.12	mg/Kg-dry	1	02/07/2018 18:21	138730
Boron	NELAP	0.49	1.96		7.83	mg/Kg-dry	1	02/07/2018 18:21	138730
Cadmium	NELAP	0.05	0.20	J	0.11	mg/Kg-dry	1	02/07/2018 18:21	138730
Chromium	NELAP	0.20	0.49	X	30.4	mg/Kg-dry	1	02/07/2018 18:21	138730
Cobalt	NELAP	0.20	0.49		12.3	mg/Kg-dry	1	02/07/2018 18:21	138730
Copper	NELAP	0.15	0.49		23.5	mg/Kg-dry	1	02/07/2018 18:21	138730

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-014

Client Sample ID: 2291V-3-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Iron	NELAP	0.98	1.96	X	30600	mg/Kg-dry	1	02/07/2018 18:21	138730
Lead	NELAP	0.49	1.47		15.8	mg/Kg-dry	1	02/07/2018 18:21	138730
Magnesium	NELAP	0.39	4.90		5990	mg/Kg-dry	1	02/07/2018 18:21	138730
Manganese	NELAP	0.07	0.29	X	880	mg/Kg-dry	1	02/07/2018 18:21	138730
Nickel	NELAP	0.20	0.49		29.6	mg/Kg-dry	1	02/07/2018 18:21	138730
Silver	NELAP	0.15	0.49		< 0.49	mg/Kg-dry	1	02/07/2018 18:21	138730
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/07/2018 18:21	138730
Vanadium	NELAP	0.20	0.98		59.7	mg/Kg-dry	1	02/07/2018 18:21	138730
Zinc	NELAP	0.39	0.98		59.9	mg/Kg-dry	1	02/07/2018 18:21	138730
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98	J	0.49	mg/Kg-dry	10	02/07/2018 18:11	138731
<b>SW-846 7471B</b>									
Mercury	NELAP	0.004	0.013		0.070	mg/Kg-dry	1	02/06/2018 9:05	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.168	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
1,2-Dichlorobenzene	NELAP	0.201	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
1,3-Dichlorobenzene	NELAP	0.212	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
1,4-Dichlorobenzene	NELAP	0.201	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,4,5-Trichlorophenol	NELAP	0.139	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,4,6-Trichlorophenol	NELAP	0.159	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,4-Dichlorophenol	NELAP	0.153	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,4-Dimethylphenol	NELAP	0.161	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,4-Dinitrophenol	NELAP	0.135	1.26		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,4-Dinitrotoluene	NELAP	0.132	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2,6-Dinitrotoluene	NELAP	0.137	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2-Chloronaphthalene	NELAP	0.152	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2-Chlorophenol	NELAP	0.161	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2-Methylnaphthalene	NELAP	0.150	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2-Nitroaniline	NELAP	0.202	1.26		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
2-Nitrophenol	NELAP	0.142	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
3,3'-Dichlorobenzidine	NELAP	0.253	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
3-Nitroaniline	NELAP	0.190	1.26		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4,6-Dinitro-2-methylphenol	NELAP	0.137	1.26		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4-Bromophenyl phenyl ether	NELAP	0.116	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4-Chloro-3-methylphenol	NELAP	0.139	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4-Chloroaniline	NELAP	0.190	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4-Chlorophenyl phenyl ether	NELAP	0.125	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4-Nitroaniline	NELAP	0.190	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
4-Nitrophenol	NELAP	0.152	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832



Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-014

Client Sample ID: 2291V-3-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-chloroethoxy)methane	NELAP	0.148	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Bis(2-chloroethyl)ether	NELAP	0.180	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Bis(2-chloroisopropyl)ether	NELAP	0.144	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.148	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Butyl benzyl phthalate	NELAP	0.128	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Carbazole	NELAP	0.154	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Dibenzofuran	NELAP	0.190	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Diethyl phthalate	NELAP	0.121	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Dimethyl phthalate	NELAP	0.115	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Di-n-butyl phthalate	NELAP	0.130	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Di-n-octyl phthalate	NELAP	0.132	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Hexachlorobenzene	NELAP	0.211	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Hexachlorobutadiene	NELAP	0.196	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Hexachlorocyclopentadiene	NELAP	0.129	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Hexachloroethane	NELAP	0.211	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Isophorone	NELAP	0.149	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
m,p-Cresol	NELAP	0.159	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Nitrobenzene	NELAP	0.158	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
N-Nitroso-di-n-propylamine	NELAP	0.139	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
N-Nitrosodiphenylamine	NELAP	0.116	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
o-Cresol	NELAP	0.149	0.632		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Pentachlorophenol	NELAP	0.835	2.53		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Phenol	NELAP	0.147	0.443		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 16:08	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		68.8	%REC	1	02/09/2018 16:08	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		46.8	%REC	1	02/09/2018 16:08	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		51.2	%REC	1	02/09/2018 16:08	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		53.1	%REC	1	02/09/2018 16:08	138832
Surr: Phenol-d5	*	0	38.8-103		52.7	%REC	1	02/09/2018 16:08	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		72.5	%REC	1	02/09/2018 16:08	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,1,2-Trichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,1-Dichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,1-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,2-Dichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,2-Dichloropropane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
1,3-Dichloropropene, Total	*	0.00095	0.0038		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
2-Butanone	NELAP	0.119	0.190		ND	mg/Kg-dry	1	02/06/2018 16:50	138748



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-014

Client Sample ID: 2291V-3-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
2-Hexanone	NELAP	0.00951	0.0476		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
4-Methyl-2-pentanone	NELAP	0.00951	0.0476		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Acetone	NELAP	0.0157	0.0476		0.112	mg/Kg-dry	1	02/06/2018 16:50	138748
Benzene	NELAP	0.00048	0.0010		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Bromodichloromethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Bromoform	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Bromomethane	NELAP	0.00238	0.0095		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Carbon disulfide	NELAP	0.00285	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Carbon tetrachloride	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Chlorobenzene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Chloroethane	NELAP	0.00190	0.0095		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Chloroform	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Chloromethane	NELAP	0.00190	0.0095		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
cis-1,2-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
cis-1,3-Dichloropropene	NELAP	0.00095	0.0038		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Dibromochloromethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Ethylbenzene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
m,p-Xylenes	NELAP	0.00190	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Methyl tert-butyl ether	NELAP	0.00048	0.0019		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Methylene chloride	NELAP	0.00127	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
o-Xylene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Styrene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Tetrachloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Toluene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
trans-1,2-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
trans-1,3-Dichloropropene	NELAP	0.00095	0.0038		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Trichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Vinyl acetate	NELAP	0.0190	0.0476		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Vinyl chloride	NELAP	0.00048	0.0019		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Xylenes, Total	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/06/2018 16:50	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		115.2	%REC	1	02/06/2018 16:50	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		102.1	%REC	1	02/06/2018 16:50	138748
Surr: Dibromofluoromethane	*	0	77.7-120		107.2	%REC	1	02/06/2018 16:50	138748
Surr: Toluene-d8	*	0	86-116		94.3	%REC	1	02/06/2018 16:50	138748

LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.

Client: Andrews Engineering, Inc.

Work Order: 18020119

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 15-Feb-18

Lab ID: 18020119-015

Client Sample ID: 2291V-3-B13

Matrix: SOLID

Collection Date: 02/01/2018 11:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		19.4	%	1	02/07/2018 13:51	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		80.6	%	1	02/07/2018 13:51	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.28		< 0.28	mg/Kg-dry	1	02/08/2018 14:55	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.64		1	02/06/2018 18:23	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 13:41	138915
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/13/2018 13:41	138915
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 13:41	138915
Iron	NELAP	0.0070	0.0200		0.196	mg/L	1	02/13/2018 13:41	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 13:41	138915
Manganese	NELAP	0.0016	0.0050		0.0217	mg/L	1	02/13/2018 13:41	138915
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 13:41	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0614	mg/L	1	02/08/2018 22:35	138773
Barium	NELAP	0.0024	0.0050		0.769	mg/L	1	02/08/2018 22:35	138773
Beryllium	NELAP	0.0003	0.0010	X	0.0061	mg/L	1	02/08/2018 22:35	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 22:35	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 22:35	138773
Chromium	NELAP	0.0040	0.0100	X	0.153	mg/L	1	02/08/2018 22:35	138773
Cobalt	NELAP	0.0022	0.0100		0.0400	mg/L	1	02/08/2018 22:35	138773
Iron	NELAP	0.0450	0.0500	X	166	mg/L	1	02/08/2018 22:35	138773
Lead	NELAP	0.0060	0.0070	X	0.0677	mg/L	1	02/08/2018 22:35	138773
Manganese	NELAP	0.0016	0.0050	X	2.89	mg/L	1	02/08/2018 22:35	138773
Nickel	NELAP	0.0033	0.0100	X	0.141	mg/L	1	02/08/2018 22:35	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 22:35	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 22:35	138773
Zinc	NELAP	0.0021	0.0100		0.302	mg/L	1	02/08/2018 22:35	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	02/08/2018 15:47	138774
Thallium	NELAP	0.0005	0.0010		0.0019	mg/L	5	02/09/2018 15:12	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00025	mg/L	1	02/08/2018 12:24	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		< 4.81	mg/Kg-dry	1	02/08/2018 0:41	138744
Arsenic	NELAP	1.00	2.50		8.84	mg/Kg-dry	1	02/07/2018 12:50	138732
Barium	NELAP	0.10	0.25		98.1	mg/Kg-dry	1	02/07/2018 12:50	138732
Beryllium	NELAP	0.03	0.05		1.26	mg/Kg-dry	1	02/07/2018 12:50	138732
Boron	NELAP	0.50	2.00		8.38	mg/Kg-dry	1	02/07/2018 12:50	138732
Cadmium	NELAP	0.05	0.20		0.30	mg/Kg-dry	1	02/07/2018 12:50	138732
Chromium	NELAP	0.20	0.50	X	23.5	mg/Kg-dry	1	02/07/2018 12:50	138732
Cobalt	NELAP	0.20	0.50		9.89	mg/Kg-dry	1	02/07/2018 12:50	138732
Copper	NELAP	0.15	0.50		19.6	mg/Kg-dry	1	02/07/2018 12:50	138732

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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Iron	NELAP	1.00	2.00	SX	<b>26900</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Lead	NELAP	0.50	1.50		<b>12.7</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Magnesium	NELAP	0.40	5.00	S	<b>4120</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Manganese	NELAP	0.07	0.30	SX	<b>780</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Nickel	NELAP	0.20	0.50		<b>24.8</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Silver	NELAP	0.15	0.50		<b>&lt; 0.50</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Thallium	NELAP	1.50	2.60		<b>&lt; 2.60</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Vanadium	NELAP	0.20	1.00		<b>47.2</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
Zinc	NELAP	0.40	1.00		<b>49.7</b>	mg/Kg-dry	1	02/07/2018 12:50	138732
<i>Matrix spike control limits for Fe, Mg and Mn are not applicable due to high sample/spike ratio.</i>									
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00	J	<b>0.40</b>	mg/Kg-dry	10	02/07/2018 19:01	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		<b>0.040</b>	mg/Kg-dry	1	02/06/2018 9:07	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.163	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
1,2-Dichlorobenzene	NELAP	0.195	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
1,3-Dichlorobenzene	NELAP	0.206	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
1,4-Dichlorobenzene	NELAP	0.195	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,4,5-Trichlorophenol	NELAP	0.135	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,4,6-Trichlorophenol	NELAP	0.155	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,4-Dichlorophenol	NELAP	0.149	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,4-Dimethylphenol	NELAP	0.156	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,4-Dinitrophenol	NELAP	0.131	1.23		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,4-Dinitrotoluene	NELAP	0.128	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2,6-Dinitrotoluene	NELAP	0.133	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2-Chloronaphthalene	NELAP	0.147	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2-Chlorophenol	NELAP	0.156	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2-Methylnaphthalene	NELAP	0.146	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2-Nitroaniline	NELAP	0.197	1.23		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
2-Nitrophenol	NELAP	0.138	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
3,3'-Dichlorobenzidine	NELAP	0.246	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
3-Nitroaniline	NELAP	0.184	1.23		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4,6-Dinitro-2-methylphenol	NELAP	0.133	1.23		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4-Bromophenyl phenyl ether	NELAP	0.113	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4-Chloro-3-methylphenol	NELAP	0.135	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4-Chloroaniline	NELAP	0.184	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4-Chlorophenyl phenyl ether	NELAP	0.122	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4-Nitroaniline	NELAP	0.184	0.614		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
4-Nitrophenol	NELAP	0.147	0.430		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Acenaphthene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Acenaphthylene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Anthracene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Benzo(a)anthracene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Benzo(a)pyrene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Benzo(b)fluoranthene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.042		<b>ND</b>	mg/Kg-dry	1	02/09/2018 16:41	138832



# Laboratory Results

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Matrix: SOLID

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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Bis(2-chloroethoxy)methane	NELAP	0.144	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Bis(2-chloroethyl)ether	NELAP	0.174	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Bis(2-chloroisopropyl)ether	NELAP	0.140	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.144	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Butyl benzyl phthalate	NELAP	0.124	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Carbazole	NELAP	0.150	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Dibenzofuran	NELAP	0.184	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Diethyl phthalate	NELAP	0.118	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Dimethyl phthalate	NELAP	0.112	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Di-n-butyl phthalate	NELAP	0.127	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Di-n-octyl phthalate	NELAP	0.128	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Hexachlorobenzene	NELAP	0.205	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Hexachlorobutadiene	NELAP	0.190	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Hexachlorocyclopentadiene	NELAP	0.125	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Hexachloroethane	NELAP	0.205	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Isophorone	NELAP	0.145	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
m,p-Cresol	NELAP	0.155	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Nitrobenzene	NELAP	0.154	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
N-Nitroso-di-n-propylamine	NELAP	0.135	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
N-Nitrosodiphenylamine	NELAP	0.113	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
o-Cresol	NELAP	0.145	0.614		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Pentachlorophenol	NELAP	0.811	2.46		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Phenol	NELAP	0.143	0.430		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 16:41	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		59.5	%REC	1	02/09/2018 16:41	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		40.4	%REC	1	02/09/2018 16:41	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		40.4	%REC	1	02/09/2018 16:41	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		43.0	%REC	1	02/09/2018 16:41	138832
Surr: Phenol-d5	*	0	38.8-103		42.4	%REC	1	02/09/2018 16:41	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		63.1	%REC	1	02/09/2018 16:41	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,1,2-Trichloroethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,1-Dichloroethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,1-Dichloroethene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,2-Dichloroethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,2-Dichloropropane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
1,3-Dichloropropene, Total	*	0.00086	0.0034		ND	mg/Kg-dry	1	02/06/2018 17:16	138748



# Laboratory Results

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Matrix: SOLID

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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
2-Butanone	NELAP	0.108	0.172		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
2-Hexanone	NELAP	0.00862	0.0431		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
4-Methyl-2-pentanone	NELAP	0.00862	0.0431		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Acetone	NELAP	0.0142	0.0431		0.128	mg/Kg-dry	1	02/06/2018 17:16	138748
Benzene	NELAP	0.00043	0.0009	J	0.0005	mg/Kg-dry	1	02/06/2018 17:16	138748
Bromodichloromethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Bromoform	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Bromomethane	NELAP	0.00215	0.0086		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Carbon disulfide	NELAP	0.00259	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Carbon tetrachloride	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Chlorobenzene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Chloroethane	NELAP	0.00172	0.0086		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Chloroform	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Chloromethane	NELAP	0.00172	0.0086		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
cis-1,2-Dichloroethene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
cis-1,3-Dichloropropene	NELAP	0.00086	0.0034		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Dibromochloromethane	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Ethylbenzene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
m,p-Xylenes	NELAP	0.00172	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Methyl tert-butyl ether	NELAP	0.00043	0.0017		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Methylene chloride	NELAP	0.00115	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
o-Xylene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Styrene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Tetrachloroethene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Toluene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
trans-1,2-Dichloroethene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
trans-1,3-Dichloropropene	NELAP	0.00086	0.0034		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Trichloroethene	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Vinyl acetate	NELAP	0.0172	0.0431		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Vinyl chloride	NELAP	0.00043	0.0017		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Xylenes, Total	NELAP	0.00086	0.0043		ND	mg/Kg-dry	1	02/06/2018 17:16	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		116.0	%REC	1	02/06/2018 17:16	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		106.3	%REC	1	02/06/2018 17:16	138748
Surr: Dibromofluoromethane	*	0	77.7-120		107.7	%REC	1	02/06/2018 17:16	138748
Surr: Toluene-d8	*	0	86-116		96.7	%REC	1	02/06/2018 17:16	138748

LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.



# CHAIN OF CUSTODY RECORD

ICF 2/5/18 TG  
18020119

<b>Client Contact</b> Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	<b>Laboratory</b> Lab: TekLab, Inc. Address: 5445 Horseshoe Lake Road Collinsville, IL 62234 Phone: 877-344-1003 Contact: Shelly Hennessy email: shennessy@teklabinc.com	Project Name: <u>IL 173 McHenry Co</u> Project No.: <u>PTB 184-006, OIA AET-OIA</u> TAT: <input checked="" type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: <u>Arnesha V.</u>	COC No.: <u>1</u> of <u>4</u> Lab Job No.: <u>18020119</u> Sample Temp: <u>3.02</u>
---	--	---	---

**Special Instructions:**  
See Table 2 for complete parameter lists and minimum reporting limits.  
\* If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
\*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.

ANALYSES												
VOCS	SVOCs	BETX & MTBE	PNAS	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	pH	% Solids	Waste Characterization		

**Matrix Key:**  
W: Water  
S: Soil  
SL: Sludge  
S: Sediment  
L: Leachate  
DW: Drinking Water  
OL: Oil  
O: Other

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCS	SVOCs	BETX & MTBE	PNAS	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	pH	% Solids	Waste Characterization	Comments
18020119-001	2291V-3-B01	2/1/18	1330	S	X	X					X	X	X	X	X	
-002	2291V-3-B02	2/1/18	1320													
-003	2291V-3-B03	2/1/18	1310													
-004	2291V-3-B04	2/1/18	1300													
-005	2291V-3-B05	2/1/18	1245													
-006	2291V-3-B05 DUP	2/1/18	1250													
-007	2291V-3-B06	2/1/18	1235													
-008	2291V-3-B07	2/1/18	1225													
-009	2291V-3-B08-1	2/1/18	1210													
-010	2291V-3-B08-2	2/1/18	1215													
-011	2291V-3-B09	2/1/18	1200													
-012	2291V-3-B10	2/1/18	1150		✓	✓					✓	✓	✓	✓	✓	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/2/18 0800</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/2/18 10:15</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/5/18 0910</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/5/18 0910</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/5/18 1242</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/5/18 1242</u>



# CHAIN OF CUSTODY RECORD

KE 2/15/18 TC  
18020119

<b>Client Contact</b> Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	<b>Laboratory</b> Lab: TekLab, Inc. Address: 5445 Horseshoe Lake Road Collinsville, IL 62234 Phone: 877-344-1003 Contact: Shelly Hennessy email: shennessy@teklabinc.com	Project Name: <u>IL 173 Mellency Co.</u> Project No.: <u>PTB 184-006, 01A AE7-01A</u> TAT: <input checked="" type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: <u>Aneesha V.</u>	COC No.: <u>2 of 4</u> Lab Job No.: <u>18020119</u> Sample Temp:
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**Special Instructions:**  
 See Table 2 for complete parameter lists and minimum reporting limits.  
 \* If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
 \*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.

					ANALYSES												
Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	pH	% Solids	Waste Characterization		
18020119-013	2291V-3-B11	2/1/18	1140	S	X	X					X	X	X	X	X		
-014	2291V-3-B12	2/1/18	1130	S	X	X					X	X	X	X	X		
-015	2291V-3-B13	2/1/18	1120	S	X	X					X	X	X	X	X		
-016	2291V-3-B14	2/1/18	1110	S	X	X					X	X	X	X	X		
-017	Trip Blank 5	2/1/18	1330		X												
-018	Trip Blank 6	2/1/18	1330		X												

**Matrix Key:**  
 W: Water  
 S: Soil  
 SL: Sludge  
 S: Sediment  
 L: Leachate  
 DW: Drinking Water  
 OL: Oil  
 O: Other

**Comments**  
 Associated w/ 3-301 thru 3-307  
 Associated w/ 3-308 thru 3-314

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/2/18 0800</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/2/18 10:15</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/5/18 0910</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/5/18 0910</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/5/18 1242</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/5/18 1242</u>



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-145720-1  
Client Project/Site: IDOT - AE7-01

For:  
Andrews Engineering Inc.  
3300 Ginger Creek Drive  
Springfield, Illinois 62711

Attn: Ms. Colleen Grey



Authorized for release by:  
6/5/2018 8:12:38 AM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-1

**Client Sample ID: 2291V-3-B06**

**Lab Sample ID: 500-145720-1**

**Date Collected: 05/18/18 12:10**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.0015		0.0015	0.00049	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00047	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00063	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,1-Dichloroethane	<0.0015		0.0015	0.00050	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,1-Dichloroethene	<0.0015		0.0015	0.00050	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,2-Dichloroethane	<0.0037		0.0037	0.0011	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,2-Dichloropropane	<0.0015		0.0015	0.00038	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
1,3-Dichloropropene, Total	<0.0015		0.0015	0.00051	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
2-Butanone (MEK)	<0.0037		0.0037	0.0016	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
2-Hexanone	<0.0037		0.0037	0.0011	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
4-Methyl-2-pentanone (MIBK)	<0.0037		0.0037	0.0011	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Acetone	<0.015		0.015	0.0064	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Benzene	<0.0015		0.0015	0.00037	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Bromodichloromethane	<0.0015		0.0015	0.00030	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Bromoform	<0.0015		0.0015	0.00043	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Bromomethane	<0.0037		0.0037	0.0014	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Carbon disulfide	<0.0037		0.0037	0.00076	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Carbon tetrachloride	<0.0015		0.0015	0.00042	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Chlorobenzene	<0.0015		0.0015	0.00054	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Chloroethane	<0.0037		0.0037	0.0011	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Chloroform	<0.0015		0.0015	0.00051	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Chloromethane	<0.0037		0.0037	0.0015	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00041	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00044	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Dibromochloromethane	<0.0015		0.0015	0.00048	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Ethylbenzene	<0.0015		0.0015	0.00070	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00043	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Methylene Chloride	<0.0037		0.0037	0.0014	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Styrene	<0.0015		0.0015	0.00044	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Tetrachloroethene	<0.0015		0.0015	0.00050	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Toluene	<0.0015		0.0015	0.00037	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00065	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00051	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Trichloroethene	<0.0015		0.0015	0.00049	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Vinyl chloride	<0.0015		0.0015	0.00065	mg/Kg		05/19/18 15:15	05/27/18 19:00	1
Xylenes, Total	<0.0029		0.0029	0.00047	mg/Kg		05/19/18 15:15	05/27/18 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	05/19/18 15:15	05/27/18 19:00	1
4-Bromofluorobenzene (Surr)	100		75 - 131	05/19/18 15:15	05/27/18 19:00	1
Dibromofluoromethane	88		75 - 126	05/19/18 15:15	05/27/18 19:00	1
Toluene-d8 (Surr)	109		75 - 124	05/19/18 15:15	05/27/18 19:00	1

# Definitions/Glossary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-1

## Qualifiers

### GC/MS VOA

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

### GC/MS Semi VOA

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

## Glossary

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

# Accreditation/Certification Summary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-1

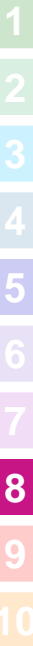
## Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



# CHAIN OF CUSTODY RECORD

<b>Client Contact</b> Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	<b>Laboratory</b> Lab: Test America - Chicago Address: 2417 Bond Street University Park, IL 60484 Phone: 708-534-5200 Contact: Dick Wright email: richard.wright@testamericainc.com	Project Name: <u>16173, McHENRY CO.</u> Project No.: <u>PTB 184-006/AE7-01A</u> TAT: <input type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: <u>Saeid Khodaei</u>	COC No.: <u>1</u> of <u>1</u> Lab Job No.: <u>500145720</u> Sample Temp.: <u>46</u>
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**Special Instructions:**  
 See Table 2 for complete parameter lists and minimum reporting limits.  
 \* If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
 \*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.  
 \*\*\* If total cyanide exceeds Class I Standard, run ASTM D3987 (Neutral Leach) cyanide.

ANALYSES												
VOCs	SVOCs	BETX & MTBE	PNAS	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	*** Cyanide	pH	% Solids	Waste Characterization	

**Matrix Key:**  
 W: Water  
 S: Soil  
 SL: Sludge  
 S: Sediment  
 L: Leachate  
 DW: Drinking Water  
 OL: Oil  
 O: Other

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAS	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	*** Cyanide	pH	% Solids	Waste Characterization	Comments
1	2291V-3-1306	5-16-18	1210	S	X												
2	2291V-3-1307	5-16-18	1200	↓		X											
3	TRIP BLANK #R	5-18-18			X												



Relinquished by: <i>Saeid Khodaei</i>	Date/Time: 5/18/18 - 1300	Received by: <i>[Signature]</i>	Date/Time: 5-18-18 1600
Relinquished by: <i>[Signature]</i>	Date/Time: 5-18-18 1820	Received by: <i>Saeid Khodaei</i>	Date/Time: 05/18/18 1820
Relinquished by:	Date/Time:	Received by:	Date/Time:



# Illinois Environmental Protection Agency

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

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

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

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

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

### I. Source Location Information

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

Project Name: FAP 303 (IL 173) Office Phone Number, if available: \_\_\_\_\_

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

351 West IL173

City: Fox Lake State: IL Zip Code: 60081

County: McHenry Township: Burton

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

Latitude: 42.48060 Longitude: -88.20450

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

Email, if available: Kristine.Kutscher@illinois.gov

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

Project Name: FAP 303 (IL 173)

Latitude: 42.48060 Longitude: -88.20450

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and approximately located 35 Ill. Adm. Code 1100.610(a):

LOCATIONS 2291V-4-B01 AND 2291V-4-B03 THROUGH -B05 WERE SAMPLED ADJACENT TO SITE 2291V-4. SEE TABLE 3b AND FIGURES 3,4 AND 6 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

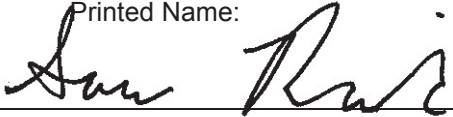
TEKLAB INC. ANALYTIAL REPORT - WORK ORDER: 18020045

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

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

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

Company Name: Andrews Engineering, Inc.  
 Street Address: 420 Eisenhower Lane North  
 City: Lombard State: IL Zip Code: 60148  
 Phone: 630-953-3332

Savo Radulovic  
 Printed Name:  
  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

June 15, 2018  
 Date:



The following table summarizes the results of laboratory analysis of site soil samples. In reading the table,

- Only parameters reported at concentrations above the most stringent MAC are listed.
- Samples with the notation “**No Contaminants of Concern Noted**” were below the most stringent MAC.

The laboratory report for site soils follows this summary table.



**THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES**

**ANALYTICAL PARAMETERS**

<b>Volatile Organic Compounds (mg/kg)</b>
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichloropropene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether (MTBE)
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl acetate
Vinyl chloride
Xylenes, total
<b>Semivolatile Organic Compounds (mg/kg)</b>
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Methylphenol
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo(a,h)anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene

**THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES**

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
<b>Inorganic Compounds, Total (mg/kg)</b>
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc
Cyanide
<b>TCLP/SPLP Inorganics (mg/L)</b>
Antimony
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Iron
Lead
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide

**ISGS Site 2291V-4**

**Rock Corner Marathon Gasoline Station**

Sample ID	2291V-4-B01	2291V-4-B03	2291V-4-B03 DUP	Maximum Allowable Concentration				
Sample Depth (ft)	0-3	0-4	0-4	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area
Sample Date	1/31/2018	1/31/2018	1/31/2018					
PID	0	0	0					
Sample pH	7.94	7.37	7.53					
Matrix	Soil	Soil	Soil					
<b>No Contaminants of Concern Noted.</b>								

**ISGS Site 2291V-4**

**Rock Corner Marathon Gasoline Station**

Sample ID	2291V-4-B04-1	2291V-4-B04-2	2291V-4-B05	Maximum Allowable Concentration				
Sample Depth (ft)	0-7	7-14	0-3	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area
Sample Date	1/31/2018	1/31/2018	1/31/2018					
PID	0	0	0					
Sample pH	8.08	8.7	7.97					
Matrix	Soil	Soil	Soil					
<b>No Contaminants of Concern Noted.</b>								

February 13, 2018

Colleen Grey  
Andrews Engineering, Inc.  
3300 Ginger Creek Drive  
Springfield, IL 62711-7233  
TEL: (217) 787-2334  
FAX: (217) 787-9495



**RE:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**WorkOrder:** 18020045

Dear Colleen Grey:

TEKLAB, INC received 9 samples on 2/1/2018 11:50:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Shelly A. Hennessy  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020045

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 13-Feb-18

### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

- |  |   |
|--|---|
| # - Unknown hydrocarbon                                      | B - Analyte detected in associated Method Blank |
| E - Value above quantitation range                           | H - Holding times exceeded                      |
| I - Associated internal standard was outside method criteria | J - Analyte detected below quantitation limits  |
| M - Manual Integration used to determine area response       | ND - Not Detected at the Reporting Limit        |
| R - RPD outside accepted recovery limits                     | S - Spike Recovery outside recovery limits      |
| T - TIC(Tentatively identified compound)                     | X - Value exceeds Maximum Contaminant Level     |



## Accreditations

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020045

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 13-Feb-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-001

Client Sample ID: 2291V-4-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.3</b>	%	1	02/02/2018 16:03	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.7</b>	%	1	02/02/2018 16:03	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30		<b>&lt; 0.30</b>	mg/Kg-dry	1	02/06/2018 14:32	138693
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>7.94</b>		1	02/02/2018 18:19	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.137</b>	mg/L	1	02/12/2018 13:36	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 17:12	138712
Barium	NELAP	0.0200	0.0500		<b>0.0810</b>	mg/L	1	02/06/2018 17:12	138712
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0005</b>	mg/L	1	02/06/2018 17:12	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 17:12	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 17:12	138712
Chromium	NELAP	0.0040	0.0100		<b>0.0105</b>	mg/L	1	02/06/2018 17:12	138712
Cobalt	NELAP	0.0022	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:12	138712
Iron	NELAP	0.0070	0.0200	X	<b>8.36</b>	mg/L	1	02/06/2018 17:12	138712
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/06/2018 17:12	138712
Manganese	NELAP	0.0016	0.0050		<b>0.100</b>	mg/L	1	02/06/2018 17:12	138712
Nickel	NELAP	0.0033	0.0100	J	<b>0.0067</b>	mg/L	1	02/06/2018 17:12	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 17:12	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:12	138712
Zinc	NELAP	0.0021	0.0100		<b>0.0206</b>	mg/L	1	02/06/2018 17:12	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0004</b>	mg/L	5	02/06/2018 14:48	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 14:48	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 10:10	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		<b>&lt; 4.63</b>	mg/Kg-dry	1	02/05/2018 12:26	138658
Arsenic	NELAP	0.94	2.36		<b>8.22</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Barium	NELAP	0.09	0.24		<b>160</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Beryllium	NELAP	0.03	0.05		<b>0.78</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Boron	NELAP	0.47	1.89		<b>3.93</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Cadmium	NELAP	0.05	0.19	J	<b>0.11</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Chromium	NELAP	0.19	0.47	X	<b>21.5</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Cobalt	NELAP	0.19	0.47		<b>11.7</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Copper	NELAP	0.14	0.47		<b>13.0</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Iron	NELAP	0.94	1.89	X	<b>20700</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Lead	NELAP	0.47	1.42		<b>14.2</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Magnesium	NELAP	0.38	4.72		<b>3170</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Manganese	NELAP	0.07	0.28	X	<b>977</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Nickel	NELAP	0.19	0.47		<b>17.8</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Silver	NELAP	0.14	0.47		<b>&lt; 0.47</b>	mg/Kg-dry	1	02/05/2018 17:48	138654
Thallium	NELAP	1.42	2.45		<b>&lt; 2.45</b>	mg/Kg-dry	1	02/05/2018 17:48	138654



Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-001

Client Sample ID: 2291V-4-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Vanadium	NELAP	0.19	0.94		39.6	mg/Kg-dry	1	02/05/2018 17:48	138654
Zinc	NELAP	0.38	0.94		51.7	mg/Kg-dry	1	02/05/2018 17:48	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/05/2018 21:37	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.035	mg/Kg-dry	1	02/06/2018 9:39	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.162	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
1,2-Dichlorobenzene	NELAP	0.194	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
1,3-Dichlorobenzene	NELAP	0.205	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
1,4-Dichlorobenzene	NELAP	0.194	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,4,5-Trichlorophenol	NELAP	0.134	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,4,6-Trichlorophenol	NELAP	0.154	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,4-Dichlorophenol	NELAP	0.148	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,4-Dimethylphenol	NELAP	0.155	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,4-Dinitrophenol	NELAP	0.130	1.22		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,4-Dinitrotoluene	NELAP	0.127	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2,6-Dinitrotoluene	NELAP	0.132	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2-Chloronaphthalene	NELAP	0.146	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2-Chlorophenol	NELAP	0.155	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2-Methylnaphthalene	NELAP	0.145	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2-Nitroaniline	NELAP	0.195	1.22		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
2-Nitrophenol	NELAP	0.137	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
3,3'-Dichlorobenzidine	NELAP	0.244	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
3-Nitroaniline	NELAP	0.183	1.22		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4,6-Dinitro-2-methylphenol	NELAP	0.132	1.22		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4-Bromophenyl phenyl ether	NELAP	0.112	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4-Chloro-3-methylphenol	NELAP	0.134	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4-Chloroaniline	NELAP	0.183	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4-Chlorophenyl phenyl ether	NELAP	0.121	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4-Nitroaniline	NELAP	0.183	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
4-Nitrophenol	NELAP	0.146	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Bis(2-chloroethoxy)methane	NELAP	0.143	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Bis(2-chloroethyl)ether	NELAP	0.173	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Bis(2-chloroisopropyl)ether	NELAP	0.139	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Bis(2-ethylhexyl)phthalate	NELAP	0.143	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Butyl benzyl phthalate	NELAP	0.123	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Carbazole	NELAP	0.149	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-001

Client Sample ID: 2291V-4-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Dibenzofuran	NELAP	0.183	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Diethyl phthalate	NELAP	0.117	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Dimethyl phthalate	NELAP	0.111	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Di-n-butyl phthalate	NELAP	0.126	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Di-n-octyl phthalate	NELAP	0.127	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Hexachlorobenzene	NELAP	0.204	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Hexachlorobutadiene	NELAP	0.189	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Hexachlorocyclopentadiene	NELAP	0.124	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Hexachloroethane	NELAP	0.204	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Isophorone	NELAP	0.144	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
m,p-Cresol	NELAP	0.154	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Nitrobenzene	NELAP	0.152	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
N-Nitroso-di-n-propylamine	NELAP	0.134	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
N-Nitrosodiphenylamine	NELAP	0.112	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
o-Cresol	NELAP	0.144	0.610		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Pentachlorophenol	NELAP	0.805	2.44		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Phenol	NELAP	0.141	0.427		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:22	138726
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		64.2	%REC	1	02/06/2018 16:22	138726
Surr: 2-Fluorobiphenyl	*	0	29.3-105		57.4	%REC	1	02/06/2018 16:22	138726
Surr: 2-Fluorophenol	*	0	35.8-97.2		55.8	%REC	1	02/06/2018 16:22	138726
Surr: Nitrobenzene-d5	*	0	36.2-95.2		49.3	%REC	1	02/06/2018 16:22	138726
Surr: Phenol-d5	*	0	38.8-103		58.2	%REC	1	02/06/2018 16:22	138726
Surr: p-Terphenyl-d14	*	0	43.2-116		69.3	%REC	1	02/06/2018 16:22	138726

Allowable Marginal Exceedance of Benzo(a)pyrene in the laboratory control sample is verified per the TNI Standard.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,1,2,2-Tetrachloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,1,2-Trichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,1-Dichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,1-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,2-Dichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,2-Dichloropropane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
1,3-Dichloropropene, Total	*	0.00091	0.0036		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
2-Butanone	NELAP	0.114	0.182		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
2-Hexanone	NELAP	0.00908	0.0454		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
4-Methyl-2-pentanone	NELAP	0.00908	0.0454		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Acetone	NELAP	0.0150	0.0454	J	0.0383	mg/Kg-dry	1	02/02/2018 20:50	138641
Benzene	NELAP	0.00045	0.0009		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Bromodichloromethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Bromoform	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641



## Laboratory Results

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Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-001

Client Sample ID: 2291V-4-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromomethane	NELAP	0.00227	0.0091		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Carbon disulfide	NELAP	0.00272	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Carbon tetrachloride	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Chlorobenzene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Chloroethane	NELAP	0.00182	0.0091		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Chloroform	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Chloromethane	NELAP	0.00182	0.0091		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
cis-1,2-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
cis-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Dibromochloromethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Ethylbenzene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
m,p-Xylenes	NELAP	0.00182	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Methyl tert-butyl ether	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Methylene chloride	NELAP	0.00121	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
o-Xylene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Styrene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Tetrachloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Toluene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
trans-1,2-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
trans-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Trichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Vinyl acetate	NELAP	0.0182	0.0454		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Vinyl chloride	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Xylenes, Total	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/02/2018 20:50	138641
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>118.3</b>	%REC	1	02/02/2018 20:50	138641
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>96.5</b>	%REC	1	02/02/2018 20:50	138641
Surr: Dibromofluoromethane	*	0	77.7-120		<b>99.6</b>	%REC	1	02/02/2018 20:50	138641
Surr: Toluene-d8	*	0	86-116		<b>97.5</b>	%REC	1	02/02/2018 20:50	138641

*Allowable Marginal Exceedance of Bromoform in the laboratory control sample is verified per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-003

Client Sample ID: 2291V-4-B03

Matrix: SOLID

Collection Date: 01/31/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		18.6	%	1	02/02/2018 16:04	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		81.4	%	1	02/02/2018 16:04	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.29	J	0.15	mg/Kg-dry	1	02/06/2018 14:41	138693
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.37		1	02/02/2018 18:24	R243064
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 17:23	138712
Barium	NELAP	0.0200	0.0500		0.0784	mg/L	1	02/06/2018 17:23	138712
Beryllium	NELAP	0.0003	0.0010	J	0.0003	mg/L	1	02/06/2018 17:23	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 17:23	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 17:23	138712
Chromium	NELAP	0.0040	0.0100	J	0.0063	mg/L	1	02/06/2018 17:23	138712
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 17:23	138712
Iron	NELAP	0.0070	0.0200		4.46	mg/L	1	02/06/2018 17:23	138712
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/06/2018 17:23	138712
Manganese	NELAP	0.0016	0.0050		0.0547	mg/L	1	02/06/2018 17:23	138712
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/06/2018 17:23	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 17:23	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 17:23	138712
Zinc	NELAP	0.0021	0.0100		0.0148	mg/L	1	02/06/2018 17:23	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	02/06/2018 15:05	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 15:05	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 10:14	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.36	4.55		< 4.55	mg/Kg-dry	1	02/05/2018 12:52	138658
Arsenic	NELAP	0.98	2.45		8.75	mg/Kg-dry	1	02/05/2018 18:06	138654
Barium	NELAP	0.10	0.25		129	mg/Kg-dry	1	02/05/2018 18:06	138654
Beryllium	NELAP	0.03	0.05		0.74	mg/Kg-dry	1	02/05/2018 18:06	138654
Boron	NELAP	0.49	1.96		5.38	mg/Kg-dry	1	02/05/2018 18:06	138654
Cadmium	NELAP	0.05	0.20	J	0.17	mg/Kg-dry	1	02/05/2018 18:06	138654
Chromium	NELAP	0.20	0.49	X	21.9	mg/Kg-dry	1	02/05/2018 18:06	138654
Cobalt	NELAP	0.20	0.49		9.66	mg/Kg-dry	1	02/05/2018 18:06	138654
Copper	NELAP	0.15	0.49		16.2	mg/Kg-dry	1	02/05/2018 18:06	138654
Iron	NELAP	0.98	1.96	X	21400	mg/Kg-dry	1	02/05/2018 18:06	138654
Lead	NELAP	0.49	1.47		17.7	mg/Kg-dry	1	02/05/2018 18:06	138654
Magnesium	NELAP	0.39	4.90		6250	mg/Kg-dry	1	02/05/2018 18:06	138654
Manganese	NELAP	0.07	0.29	X	757	mg/Kg-dry	1	02/05/2018 18:06	138654
Nickel	NELAP	0.20	0.49		19.2	mg/Kg-dry	1	02/05/2018 18:06	138654
Silver	NELAP	0.15	0.49		< 0.49	mg/Kg-dry	1	02/05/2018 18:06	138654
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/05/2018 18:06	138654
Vanadium	NELAP	0.20	0.98		41.5	mg/Kg-dry	1	02/05/2018 18:06	138654
Zinc	NELAP	0.39	0.98		53.0	mg/Kg-dry	1	02/05/2018 18:06	138654



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-003

Client Sample ID: 2291V-4-B03

Matrix: SOLID

Collection Date: 01/31/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98		< 0.98	mg/Kg-dry	10	02/05/2018 21:53	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.035	mg/Kg-dry	1	02/06/2018 9:52	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.160	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
1,2-Dichlorobenzene	NELAP	0.191	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
1,3-Dichlorobenzene	NELAP	0.202	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
1,4-Dichlorobenzene	NELAP	0.191	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,4,5-Trichlorophenol	NELAP	0.132	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,4,6-Trichlorophenol	NELAP	0.152	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,4-Dichlorophenol	NELAP	0.145	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,4-Dimethylphenol	NELAP	0.153	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,4-Dinitrophenol	NELAP	0.129	1.20		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,4-Dinitrotoluene	NELAP	0.125	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2,6-Dinitrotoluene	NELAP	0.130	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2-Chloronaphthalene	NELAP	0.144	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2-Chlorophenol	NELAP	0.153	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2-Methylnaphthalene	NELAP	0.143	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2-Nitroaniline	NELAP	0.192	1.20		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
2-Nitrophenol	NELAP	0.135	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
3,3'-Dichlorobenzidine	NELAP	0.240	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
3-Nitroaniline	NELAP	0.180	1.20		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4,6-Dinitro-2-methylphenol	NELAP	0.130	1.20		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4-Bromophenyl phenyl ether	NELAP	0.111	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4-Chloro-3-methylphenol	NELAP	0.132	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4-Chloroaniline	NELAP	0.180	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4-Chlorophenyl phenyl ether	NELAP	0.119	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4-Nitroaniline	NELAP	0.180	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
4-Nitrophenol	NELAP	0.144	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Bis(2-chloroethoxy)methane	NELAP	0.141	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Bis(2-chloroethyl)ether	NELAP	0.171	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Bis(2-chloroisopropyl)ether	NELAP	0.137	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Bis(2-ethylhexyl)phthalate	NELAP	0.141	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Butyl benzyl phthalate	NELAP	0.121	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Carbazole	NELAP	0.147	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Dibenzofuran	NELAP	0.180	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Diethyl phthalate	NELAP	0.115	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-003

Client Sample ID: 2291V-4-B03

Matrix: SOLID

Collection Date: 01/31/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dimethyl phthalate	NELAP	0.109	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Di-n-butyl phthalate	NELAP	0.124	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Di-n-octyl phthalate	NELAP	0.125	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Hexachlorobenzene	NELAP	0.201	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Hexachlorobutadiene	NELAP	0.186	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Hexachlorocyclopentadiene	NELAP	0.123	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Hexachloroethane	NELAP	0.201	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Isophorone	NELAP	0.142	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
m,p-Cresol	NELAP	0.152	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Nitrobenzene	NELAP	0.150	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
N-Nitroso-di-n-propylamine	NELAP	0.132	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
N-Nitrosodiphenylamine	NELAP	0.111	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
o-Cresol	NELAP	0.142	0.601		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Pentachlorophenol	NELAP	0.794	2.40		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Phenol	NELAP	0.139	0.421		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 16:49	138726
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		54.3	%REC	1	02/06/2018 16:49	138726
Surr: 2-Fluorobiphenyl	*	0	29.3-105		48.9	%REC	1	02/06/2018 16:49	138726
Surr: 2-Fluorophenol	*	0	35.8-97.2		50.0	%REC	1	02/06/2018 16:49	138726
Surr: Nitrobenzene-d5	*	0	36.2-95.2		44.6	%REC	1	02/06/2018 16:49	138726
Surr: Phenol-d5	*	0	38.8-103		49.5	%REC	1	02/06/2018 16:49	138726
Surr: p-Terphenyl-d14	*	0	43.2-116		63.5	%REC	1	02/06/2018 16:49	138726

Allowable Marginal Exceedance of Benzo(a)pyrene in the laboratory control sample is verified per the TNI Standard.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,1,1,2-Tetrachloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,1,2-Trichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,1-Dichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,1-Dichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,2-Dichloroethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,2-Dichloropropane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
1,3-Dichloropropene, Total	*	0.00091	0.0037		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
2-Butanone	NELAP	0.114	0.183		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
2-Hexanone	NELAP	0.00914	0.0457		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
4-Methyl-2-pentanone	NELAP	0.00914	0.0457		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Acetone	NELAP	0.0151	0.0457		0.0598	mg/Kg-dry	1	02/03/2018 1:27	138663
Benzene	NELAP	0.00046	0.0009		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Bromodichloromethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Bromoform	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Bromomethane	NELAP	0.00229	0.0091		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Carbon disulfide	NELAP	0.00274	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Carbon tetrachloride	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-003

Client Sample ID: 2291V-4-B03

Matrix: SOLID

Collection Date: 01/31/2018 11:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chlorobenzene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Chloroethane	NELAP	0.00183	0.0091		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Chloroform	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Chloromethane	NELAP	0.00183	0.0091		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
cis-1,2-Dichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
cis-1,3-Dichloropropene	NELAP	0.00091	0.0037		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Dibromochloromethane	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Ethylbenzene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
m,p-Xylenes	NELAP	0.00183	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Methyl tert-butyl ether	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Methylene chloride	NELAP	0.00122	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
o-Xylene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Styrene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Tetrachloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Toluene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
trans-1,2-Dichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
trans-1,3-Dichloropropene	NELAP	0.00091	0.0037		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Trichloroethene	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Vinyl acetate	NELAP	0.0183	0.0457		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Vinyl chloride	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Xylenes, Total	NELAP	0.00091	0.0046		ND	mg/Kg-dry	1	02/03/2018 1:27	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.2	%REC	1	02/03/2018 1:27	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		99.0	%REC	1	02/03/2018 1:27	138663
Surr: Dibromofluoromethane	*	0	77.7-120		105.2	%REC	1	02/03/2018 1:27	138663
Surr: Toluene-d8	*	0	86-116		93.9	%REC	1	02/03/2018 1:27	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-004

Client Sample ID: 2291V-4-B03 DUP

Matrix: SOLID

Collection Date: 01/31/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>18.4</b>	%	1	02/02/2018 16:05	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>81.6</b>	%	1	02/02/2018 16:05	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30	J	<b>0.16</b>	mg/Kg-dry	1	02/06/2018 14:45	138693
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>7.53</b>		1	02/02/2018 18:26	R243064
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 17:27	138712
Barium	NELAP	0.0200	0.0500	J	<b>0.0371</b>	mg/L	1	02/06/2018 17:27	138712
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0004</b>	mg/L	1	02/06/2018 17:27	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 17:27	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 17:27	138712
Chromium	NELAP	0.0040	0.0100	J	<b>0.0083</b>	mg/L	1	02/06/2018 17:27	138712
Cobalt	NELAP	0.0022	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:27	138712
Iron	NELAP	0.0070	0.0200		<b>3.97</b>	mg/L	1	02/06/2018 17:27	138712
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/06/2018 17:27	138712
Manganese	NELAP	0.0016	0.0050		<b>0.0991</b>	mg/L	1	02/06/2018 17:27	138712
Nickel	NELAP	0.0033	0.0100	J	<b>0.0034</b>	mg/L	1	02/06/2018 17:27	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 17:27	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:27	138712
Zinc	NELAP	0.0021	0.0100	J	<b>0.0082</b>	mg/L	1	02/06/2018 17:27	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0003</b>	mg/L	5	02/06/2018 15:13	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 15:13	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 10:17	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		<b>&lt; 4.81</b>	mg/Kg-dry	1	02/05/2018 12:56	138658
Arsenic	NELAP	0.96	2.40		<b>8.19</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Barium	NELAP	0.10	0.24		<b>144</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Beryllium	NELAP	0.03	0.05		<b>0.76</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Boron	NELAP	0.48	1.92		<b>3.49</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Cadmium	NELAP	0.05	0.19	J	<b>0.12</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Chromium	NELAP	0.19	0.48	X	<b>21.4</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Cobalt	NELAP	0.19	0.48		<b>11.4</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Copper	NELAP	0.14	0.48		<b>12.2</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Iron	NELAP	0.96	1.92	X	<b>20600</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Lead	NELAP	0.48	1.44		<b>16.0</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Magnesium	NELAP	0.38	4.81		<b>3590</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Manganese	NELAP	0.07	0.29	X	<b>850</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Nickel	NELAP	0.19	0.48		<b>17.9</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Silver	NELAP	0.14	0.48		<b>&lt; 0.48</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Thallium	NELAP	1.44	2.50		<b>&lt; 2.50</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Vanadium	NELAP	0.19	0.96		<b>38.8</b>	mg/Kg-dry	1	02/05/2018 18:10	138654
Zinc	NELAP	0.38	0.96		<b>50.7</b>	mg/Kg-dry	1	02/05/2018 18:10	138654



Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-004

Client Sample ID: 2291V-4-B03 DUP

Matrix: SOLID

Collection Date: 01/31/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.96		< 0.96	mg/Kg-dry	10	02/05/2018 22:01	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.027	mg/Kg-dry	1	02/06/2018 9:54	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.161	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
1,2-Dichlorobenzene	NELAP	0.193	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
1,3-Dichlorobenzene	NELAP	0.204	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
1,4-Dichlorobenzene	NELAP	0.193	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,4,5-Trichlorophenol	NELAP	0.133	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,4,6-Trichlorophenol	NELAP	0.153	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,4-Dichlorophenol	NELAP	0.147	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,4-Dimethylphenol	NELAP	0.154	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,4-Dinitrophenol	NELAP	0.130	1.21		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,4-Dinitrotoluene	NELAP	0.126	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2,6-Dinitrotoluene	NELAP	0.131	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2-Chloronaphthalene	NELAP	0.145	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2-Chlorophenol	NELAP	0.154	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2-Methylnaphthalene	NELAP	0.144	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2-Nitroaniline	NELAP	0.194	1.21		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
2-Nitrophenol	NELAP	0.136	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
3,3'-Dichlorobenzidine	NELAP	0.242	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
3-Nitroaniline	NELAP	0.182	1.21		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4,6-Dinitro-2-methylphenol	NELAP	0.131	1.21		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4-Bromophenyl phenyl ether	NELAP	0.111	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4-Chloro-3-methylphenol	NELAP	0.133	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4-Chloroaniline	NELAP	0.182	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4-Chlorophenyl phenyl ether	NELAP	0.120	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4-Nitroaniline	NELAP	0.182	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
4-Nitrophenol	NELAP	0.145	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Bis(2-chloroethoxy)methane	NELAP	0.142	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Bis(2-chloroethyl)ether	NELAP	0.172	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Bis(2-chloroisopropyl)ether	NELAP	0.138	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Bis(2-ethylhexyl)phthalate	NELAP	0.142	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Butyl benzyl phthalate	NELAP	0.122	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Carbazole	NELAP	0.148	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Dibenzofuran	NELAP	0.182	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Diethyl phthalate	NELAP	0.116	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-004

Client Sample ID: 2291V-4-B03 DUP

Matrix: SOLID

Collection Date: 01/31/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dimethyl phthalate	NELAP	0.110	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Di-n-butyl phthalate	NELAP	0.125	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Di-n-octyl phthalate	NELAP	0.126	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Hexachlorobenzene	NELAP	0.202	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Hexachlorobutadiene	NELAP	0.188	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Hexachlorocyclopentadiene	NELAP	0.124	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Hexachloroethane	NELAP	0.202	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Isophorone	NELAP	0.143	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
m,p-Cresol	NELAP	0.153	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Nitrobenzene	NELAP	0.151	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
N-Nitroso-di-n-propylamine	NELAP	0.133	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
N-Nitrosodiphenylamine	NELAP	0.111	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
o-Cresol	NELAP	0.143	0.606		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Pentachlorophenol	NELAP	0.799	2.42		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Phenol	NELAP	0.141	0.424		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:17	138726
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		65.7	%REC	1	02/06/2018 17:17	138726
Surr: 2-Fluorobiphenyl	*	0	29.3-105		56.0	%REC	1	02/06/2018 17:17	138726
Surr: 2-Fluorophenol	*	0	35.8-97.2		55.0	%REC	1	02/06/2018 17:17	138726
Surr: Nitrobenzene-d5	*	0	36.2-95.2		51.0	%REC	1	02/06/2018 17:17	138726
Surr: Phenol-d5	*	0	38.8-103		53.2	%REC	1	02/06/2018 17:17	138726
Surr: p-Terphenyl-d14	*	0	43.2-116		73.6	%REC	1	02/06/2018 17:17	138726

Allowable Marginal Exceedance of Benzo(a)pyrene in the laboratory control sample is verified per the TNI Standard.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,1,2-Trichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,1-Dichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,1-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,2-Dichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,2-Dichloropropane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
1,3-Dichloropropene, Total	*	0.00095	0.0038		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
2-Butanone	NELAP	0.119	0.191		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
2-Hexanone	NELAP	0.00953	0.0476		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
4-Methyl-2-pentanone	NELAP	0.00953	0.0476		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Acetone	NELAP	0.0157	0.0476		0.0571	mg/Kg-dry	1	02/03/2018 1:54	138663
Benzene	NELAP	0.00048	0.0010		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Bromodichloromethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Bromoform	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Bromomethane	NELAP	0.00238	0.0095		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Carbon disulfide	NELAP	0.00286	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Carbon tetrachloride	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-004

Client Sample ID: 2291V-4-B03 DUP

Matrix: SOLID

Collection Date: 01/31/2018 11:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chlorobenzene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Chloroethane	NELAP	0.00191	0.0095		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Chloroform	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Chloromethane	NELAP	0.00191	0.0095		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
cis-1,2-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
cis-1,3-Dichloropropene	NELAP	0.00095	0.0038		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Dibromochloromethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Ethylbenzene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
m,p-Xylenes	NELAP	0.00191	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Methyl tert-butyl ether	NELAP	0.00048	0.0019		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Methylene chloride	NELAP	0.00127	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
o-Xylene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Styrene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Tetrachloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Toluene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
trans-1,2-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
trans-1,3-Dichloropropene	NELAP	0.00095	0.0038		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Trichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Vinyl acetate	NELAP	0.0191	0.0476		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Vinyl chloride	NELAP	0.00048	0.0019		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Xylenes, Total	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/03/2018 1:54	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		111.8	%REC	1	02/03/2018 1:54	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		98.7	%REC	1	02/03/2018 1:54	138663
Surr: Dibromofluoromethane	*	0	77.7-120		102.6	%REC	1	02/03/2018 1:54	138663
Surr: Toluene-d8	*	0	86-116		91.8	%REC	1	02/03/2018 1:54	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-005

Client Sample ID: 2291V-4-B04-1

Matrix: SOLID

Collection Date: 01/31/2018 11:06

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		18.2	%	1	02/02/2018 16:05	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		81.8	%	1	02/02/2018 16:05	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.29		< 0.29	mg/Kg-dry	1	02/06/2018 15:11	138693
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.08		1	02/02/2018 18:28	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.0540	mg/L	1	02/12/2018 13:44	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 17:31	138712
Barium	NELAP	0.0200	0.0500		0.0608	mg/L	1	02/06/2018 17:31	138712
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/06/2018 17:31	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 17:31	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 17:31	138712
Chromium	NELAP	0.0040	0.0100	J	0.0098	mg/L	1	02/06/2018 17:31	138712
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 17:31	138712
Iron	NELAP	0.0070	0.0200	X	6.31	mg/L	1	02/06/2018 17:31	138712
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/06/2018 17:31	138712
Manganese	NELAP	0.0016	0.0050		0.0859	mg/L	1	02/06/2018 17:31	138712
Nickel	NELAP	0.0033	0.0100	J	0.0056	mg/L	1	02/06/2018 17:31	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 17:31	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 17:31	138712
Zinc	NELAP	0.0021	0.0100	J	0.0097	mg/L	1	02/06/2018 17:31	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	02/06/2018 15:21	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 15:21	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 10:23	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		< 4.81	mg/Kg-dry	1	02/05/2018 12:59	138658
Arsenic	NELAP	0.93	2.31		9.88	mg/Kg-dry	1	02/05/2018 18:13	138654
Barium	NELAP	0.09	0.23		129	mg/Kg-dry	1	02/05/2018 18:13	138654
Beryllium	NELAP	0.03	0.05		0.98	mg/Kg-dry	1	02/05/2018 18:13	138654
Boron	NELAP	0.46	1.85		5.16	mg/Kg-dry	1	02/05/2018 18:13	138654
Cadmium	NELAP	0.05	0.19	J	0.14	mg/Kg-dry	1	02/05/2018 18:13	138654
Chromium	NELAP	0.19	0.46	X	27.2	mg/Kg-dry	1	02/05/2018 18:13	138654
Cobalt	NELAP	0.19	0.46		10.8	mg/Kg-dry	1	02/05/2018 18:13	138654
Copper	NELAP	0.14	0.46		22.1	mg/Kg-dry	1	02/05/2018 18:13	138654
Iron	NELAP	0.93	1.85	X	26600	mg/Kg-dry	1	02/05/2018 18:13	138654
Lead	NELAP	0.46	1.39		13.1	mg/Kg-dry	1	02/05/2018 18:13	138654
Magnesium	NELAP	0.37	4.63		4570	mg/Kg-dry	1	02/05/2018 18:13	138654
Manganese	NELAP	0.06	0.28	X	775	mg/Kg-dry	1	02/05/2018 18:13	138654
Nickel	NELAP	0.19	0.46		30.9	mg/Kg-dry	1	02/05/2018 18:13	138654
Silver	NELAP	0.14	0.46		< 0.46	mg/Kg-dry	1	02/05/2018 18:13	138654
Thallium	NELAP	1.39	2.41		< 2.41	mg/Kg-dry	1	02/05/2018 18:13	138654

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-005

Client Sample ID: 2291V-4-B04-1

Matrix: SOLID

Collection Date: 01/31/2018 11:06

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Vanadium	NELAP	0.19	0.93		44.6	mg/Kg-dry	1	02/05/2018 18:13	138654
Zinc	NELAP	0.37	0.93		56.9	mg/Kg-dry	1	02/05/2018 18:13	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.37	0.93		< 0.93	mg/Kg-dry	10	02/05/2018 22:10	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.037	mg/Kg-dry	1	02/06/2018 9:57	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.159	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
1,2-Dichlorobenzene	NELAP	0.190	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
1,3-Dichlorobenzene	NELAP	0.201	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
1,4-Dichlorobenzene	NELAP	0.190	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,4,5-Trichlorophenol	NELAP	0.132	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,4,6-Trichlorophenol	NELAP	0.151	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,4-Dichlorophenol	NELAP	0.145	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,4-Dimethylphenol	NELAP	0.152	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,4-Dinitrophenol	NELAP	0.128	1.20		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,4-Dinitrotoluene	NELAP	0.125	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2,6-Dinitrotoluene	NELAP	0.129	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2-Chloronaphthalene	NELAP	0.144	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2-Chlorophenol	NELAP	0.152	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2-Methylnaphthalene	NELAP	0.142	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2-Nitroaniline	NELAP	0.192	1.20		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
2-Nitrophenol	NELAP	0.134	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
3,3'-Dichlorobenzidine	NELAP	0.239	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
3-Nitroaniline	NELAP	0.180	1.20		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4,6-Dinitro-2-methylphenol	NELAP	0.129	1.20		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4-Bromophenyl phenyl ether	NELAP	0.110	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4-Chloro-3-methylphenol	NELAP	0.132	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4-Chloroaniline	NELAP	0.180	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4-Chlorophenyl phenyl ether	NELAP	0.119	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4-Nitroaniline	NELAP	0.180	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
4-Nitrophenol	NELAP	0.144	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Bis(2-chloroethoxy)methane	NELAP	0.140	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Bis(2-chloroethyl)ether	NELAP	0.170	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Bis(2-chloroisopropyl)ether	NELAP	0.136	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Bis(2-ethylhexyl)phthalate	NELAP	0.140	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Butyl benzyl phthalate	NELAP	0.121	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Carbazole	NELAP	0.146	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-005

Client Sample ID: 2291V-4-B04-1

Matrix: SOLID

Collection Date: 01/31/2018 11:06

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Dibenzofuran	NELAP	0.180	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Diethyl phthalate	NELAP	0.115	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Dimethyl phthalate	NELAP	0.109	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Di-n-butyl phthalate	NELAP	0.123	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Di-n-octyl phthalate	NELAP	0.125	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Hexachlorobenzene	NELAP	0.200	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Hexachlorobutadiene	NELAP	0.186	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Hexachlorocyclopentadiene	NELAP	0.122	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Hexachloroethane	NELAP	0.200	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Isophorone	NELAP	0.141	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
m,p-Cresol	NELAP	0.151	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Nitrobenzene	NELAP	0.150	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
N-Nitroso-di-n-propylamine	NELAP	0.132	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
N-Nitrosodiphenylamine	NELAP	0.110	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
o-Cresol	NELAP	0.141	0.599		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Pentachlorophenol	NELAP	0.790	2.39		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Phenol	NELAP	0.139	0.419		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/06/2018 17:45	138726
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		59.2	%REC	1	02/06/2018 17:45	138726
Surr: 2-Fluorobiphenyl	*	0	29.3-105		53.4	%REC	1	02/06/2018 17:45	138726
Surr: 2-Fluorophenol	*	0	35.8-97.2		52.0	%REC	1	02/06/2018 17:45	138726
Surr: Nitrobenzene-d5	*	0	36.2-95.2		47.2	%REC	1	02/06/2018 17:45	138726
Surr: Phenol-d5	*	0	38.8-103		52.7	%REC	1	02/06/2018 17:45	138726
Surr: p-Terphenyl-d14	*	0	43.2-116		67.0	%REC	1	02/06/2018 17:45	138726
<i>Allowable Marginal Exceedance of Benzo(a)pyrene in the laboratory control sample is verified per the TNI Standard.</i>									
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,1,2-Trichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,1-Dichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,1-Dichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,2-Dichloroethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,2-Dichloropropane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
1,3-Dichloropropene, Total	*	0.00092	0.0037		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
2-Butanone	NELAP	0.115	0.184		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
2-Hexanone	NELAP	0.00921	0.0461		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
4-Methyl-2-pentanone	NELAP	0.00921	0.0461		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Acetone	NELAP	0.0152	0.0461		0.0681	mg/Kg-dry	1	02/03/2018 2:20	138663
Benzene	NELAP	0.00046	0.0009		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Bromodichloromethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Bromoform	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-005

Client Sample ID: 2291V-4-B04-1

Matrix: SOLID

Collection Date: 01/31/2018 11:06

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromomethane	NELAP	0.00230	0.0092		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Carbon disulfide	NELAP	0.00276	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Carbon tetrachloride	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Chlorobenzene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Chloroethane	NELAP	0.00184	0.0092		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Chloroform	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Chloromethane	NELAP	0.00184	0.0092		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
cis-1,2-Dichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
cis-1,3-Dichloropropene	NELAP	0.00092	0.0037		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Dibromochloromethane	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Ethylbenzene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
m,p-Xylenes	NELAP	0.00184	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Methyl tert-butyl ether	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Methylene chloride	NELAP	0.00122	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
o-Xylene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Styrene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Tetrachloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Toluene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
trans-1,2-Dichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
trans-1,3-Dichloropropene	NELAP	0.00092	0.0037		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Trichloroethene	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Vinyl acetate	NELAP	0.0184	0.0461		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Vinyl chloride	NELAP	0.00046	0.0018		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Xylenes, Total	NELAP	0.00092	0.0046		ND	mg/Kg-dry	1	02/03/2018 2:20	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		115.4	%REC	1	02/03/2018 2:20	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		99.9	%REC	1	02/03/2018 2:20	138663
Surr: Dibromofluoromethane	*	0	77.7-120		104.8	%REC	1	02/03/2018 2:20	138663
Surr: Toluene-d8	*	0	86-116		94.0	%REC	1	02/03/2018 2:20	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-006

Client Sample ID: 2291V-4-B04-2

Matrix: SOLID

Collection Date: 01/31/2018 11:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>4.3</b>	%	1	02/02/2018 16:05	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>95.7</b>	%	1	02/02/2018 16:05	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.10	0.25		<b>&lt; 0.25</b>	mg/Kg-dry	1	02/06/2018 15:15	138693
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.70</b>		1	02/02/2018 18:32	R243064
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 17:34	138712
Barium	NELAP	0.0200	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 17:34	138712
Beryllium	NELAP	0.0003	0.0010		<b>&lt; 0.0010</b>	mg/L	1	02/06/2018 17:34	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 17:34	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 17:34	138712
Chromium	NELAP	0.0040	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:34	138712
Cobalt	NELAP	0.0022	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:34	138712
Iron	NELAP	0.0070	0.0200		<b>0.0482</b>	mg/L	1	02/06/2018 17:34	138712
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/06/2018 17:34	138712
Manganese	NELAP	0.0016	0.0050		<b>&lt; 0.0050</b>	mg/L	1	02/06/2018 17:34	138712
Nickel	NELAP	0.0033	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:34	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 17:34	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:34	138712
Zinc	NELAP	0.0021	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 17:34	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 15:29	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 15:29	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 10:26	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.50	5.00		<b>&lt; 5.00</b>	mg/Kg-dry	1	02/05/2018 13:03	138658
Arsenic	NELAP	1.00	2.50		<b>6.65</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Barium	NELAP	0.10	0.25		<b>23.1</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Beryllium	NELAP	0.03	0.05		<b>0.18</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Boron	NELAP	0.50	2.00		<b>8.97</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Cadmium	NELAP	0.05	0.20	J	<b>0.12</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Chromium	NELAP	0.20	0.50		<b>8.94</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Cobalt	NELAP	0.20	0.50		<b>6.18</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Copper	NELAP	0.15	0.50		<b>17.6</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Iron	NELAP	1.00	2.00		<b>14800</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Lead	NELAP	0.50	1.50		<b>3.93</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Magnesium	NELAP	0.40	5.00		<b>71200</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Manganese	NELAP	0.07	0.30		<b>379</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Nickel	NELAP	0.20	0.50		<b>17.3</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Silver	NELAP	0.15	0.50		<b>&lt; 0.50</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Thallium	NELAP	1.50	2.60		<b>&lt; 2.60</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Vanadium	NELAP	0.20	1.00		<b>25.5</b>	mg/Kg-dry	1	02/05/2018 18:17	138654
Zinc	NELAP	0.40	1.00		<b>27.5</b>	mg/Kg-dry	1	02/05/2018 18:17	138654





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020045

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 13-Feb-18

**Lab ID:** 18020045-006

**Client Sample ID:** 2291V-4-B04-2

**Matrix:** SOLID

**Collection Date:** 01/31/2018 11:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00		< 1.00	mg/Kg-dry	10	02/05/2018 22:18	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.010	J	0.005	mg/Kg-dry	1	02/06/2018 9:59	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.138	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
1,2-Dichlorobenzene	NELAP	0.164	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
1,3-Dichlorobenzene	NELAP	0.174	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
1,4-Dichlorobenzene	NELAP	0.164	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,4,5-Trichlorophenol	NELAP	0.114	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,4,6-Trichlorophenol	NELAP	0.130	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,4-Dichlorophenol	NELAP	0.125	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,4-Dimethylphenol	NELAP	0.131	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,4-Dinitrophenol	NELAP	0.111	1.03		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,4-Dinitrotoluene	NELAP	0.108	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2,6-Dinitrotoluene	NELAP	0.112	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2-Chloronaphthalene	NELAP	0.124	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2-Chlorophenol	NELAP	0.131	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2-Methylnaphthalene	NELAP	0.123	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2-Nitroaniline	NELAP	0.166	1.03		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
2-Nitrophenol	NELAP	0.116	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
3,3'-Dichlorobenzidine	NELAP	0.207	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
3-Nitroaniline	NELAP	0.155	1.03		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4,6-Dinitro-2-methylphenol	NELAP	0.112	1.03		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4-Bromophenyl phenyl ether	NELAP	0.095	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4-Chloro-3-methylphenol	NELAP	0.114	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4-Chloroaniline	NELAP	0.155	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4-Chlorophenyl phenyl ether	NELAP	0.102	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4-Nitroaniline	NELAP	0.155	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
4-Nitrophenol	NELAP	0.124	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Acenaphthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Acenaphthylene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Benzo(a)anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Benzo(a)pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Benzo(b)fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Benzo(g,h,i)perylene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Benzo(k)fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Bis(2-chloroethoxy)methane	NELAP	0.121	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Bis(2-chloroethyl)ether	NELAP	0.147	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Bis(2-chloroisopropyl)ether	NELAP	0.118	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Bis(2-ethylhexyl)phthalate	NELAP	0.121	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Butyl benzyl phthalate	NELAP	0.104	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Carbazole	NELAP	0.126	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Chrysene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Dibenzo(a,h)anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Dibenzofuran	NELAP	0.155	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Diethyl phthalate	NELAP	0.099	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-006

Client Sample ID: 2291V-4-B04-2

Matrix: SOLID

Collection Date: 01/31/2018 11:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dimethyl phthalate	NELAP	0.094	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Di-n-butyl phthalate	NELAP	0.107	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Di-n-octyl phthalate	NELAP	0.108	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Fluorene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Hexachlorobenzene	NELAP	0.173	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Hexachlorobutadiene	NELAP	0.160	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Hexachlorocyclopentadiene	NELAP	0.106	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Hexachloroethane	NELAP	0.173	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Indeno(1,2,3-cd)pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Isophorone	NELAP	0.122	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
m,p-Cresol	NELAP	0.130	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Naphthalene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Nitrobenzene	NELAP	0.129	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
N-Nitroso-di-n-propylamine	NELAP	0.114	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
N-Nitrosodiphenylamine	NELAP	0.095	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
o-Cresol	NELAP	0.122	0.517		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Pentachlorophenol	NELAP	0.683	2.07		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Phenanthrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Phenol	NELAP	0.120	0.362		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/06/2018 18:13	138726
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		74.3	%REC	1	02/06/2018 18:13	138726
Surr: 2-Fluorobiphenyl	*	0	29.3-105		68.6	%REC	1	02/06/2018 18:13	138726
Surr: 2-Fluorophenol	*	0	35.8-97.2		65.0	%REC	1	02/06/2018 18:13	138726
Surr: Nitrobenzene-d5	*	0	36.2-95.2		55.4	%REC	1	02/06/2018 18:13	138726
Surr: Phenol-d5	*	0	38.8-103		67.7	%REC	1	02/06/2018 18:13	138726
Surr: p-Terphenyl-d14	*	0	43.2-116		76.8	%REC	1	02/06/2018 18:13	138726

Allowable Marginal Exceedance of Benzo(a)pyrene in the laboratory control sample is verified per the TNI Standard.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,1,2-Trichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,1-Dichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,1-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,2-Dichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,2-Dichloropropane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
1,3-Dichloropropene, Total	*	0.00098	0.0039		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
2-Butanone	NELAP	0.122	0.195		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
2-Hexanone	NELAP	0.00975	0.0487		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
4-Methyl-2-pentanone	NELAP	0.00975	0.0487		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Acetone	NELAP	0.0161	0.0487		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Benzene	NELAP	0.00049	0.0010		0.0033	mg/Kg-dry	1	02/03/2018 2:46	138663
Bromodichloromethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Bromoform	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Bromomethane	NELAP	0.00244	0.0098		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Carbon disulfide	NELAP	0.00292	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Carbon tetrachloride	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-006

Client Sample ID: 2291V-4-B04-2

Matrix: SOLID

Collection Date: 01/31/2018 11:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chlorobenzene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Chloroethane	NELAP	0.00195	0.0098		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Chloroform	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Chloromethane	NELAP	0.00195	0.0098		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
cis-1,2-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
cis-1,3-Dichloropropene	NELAP	0.00098	0.0039		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Dibromochloromethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Ethylbenzene	NELAP	0.00098	0.0049	J	0.0017	mg/Kg-dry	1	02/03/2018 2:46	138663
m,p-Xylenes	NELAP	0.00195	0.0049	J	0.0027	mg/Kg-dry	1	02/03/2018 2:46	138663
Methyl tert-butyl ether	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Methylene chloride	NELAP	0.00130	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
o-Xylene	NELAP	0.00098	0.0049	J	0.0011	mg/Kg-dry	1	02/03/2018 2:46	138663
Styrene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Tetrachloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Toluene	NELAP	0.00098	0.0049		0.0059	mg/Kg-dry	1	02/03/2018 2:46	138663
trans-1,2-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
trans-1,3-Dichloropropene	NELAP	0.00098	0.0039		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Trichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Vinyl acetate	NELAP	0.0195	0.0487		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Vinyl chloride	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/03/2018 2:46	138663
Xylenes, Total	NELAP	0.00098	0.0049	J	0.0038	mg/Kg-dry	1	02/03/2018 2:46	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.1	%REC	1	02/03/2018 2:46	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		97.3	%REC	1	02/03/2018 2:46	138663
Surr: Dibromofluoromethane	*	0	77.7-120		103.4	%REC	1	02/03/2018 2:46	138663
Surr: Toluene-d8	*	0	86-116		92.7	%REC	1	02/03/2018 2:46	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-007

Client Sample ID: 2291V-4-B05

Matrix: SOLID

Collection Date: 01/31/2018 10:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.8	%	1	02/02/2018 16:05	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.2	%	1	02/02/2018 16:05	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30	J	0.16	mg/Kg-dry	1	02/06/2018 15:20	138693
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.97		1	02/02/2018 18:34	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.594	mg/L	1	02/12/2018 13:47	138849
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/09/2018 17:25	138849
Manganese	NELAP	0.0016	0.0050		0.0753	mg/L	1	02/09/2018 17:25	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 17:56	138712
Barium	NELAP	0.0200	0.0500		0.156	mg/L	1	02/06/2018 17:56	138712
Beryllium	NELAP	0.0003	0.0010	J	0.0007	mg/L	1	02/06/2018 17:56	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 17:56	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 17:56	138712
Chromium	NELAP	0.0040	0.0100		0.0188	mg/L	1	02/06/2018 17:56	138712
Cobalt	NELAP	0.0022	0.0100	J	0.0039	mg/L	1	02/06/2018 17:56	138712
Iron	NELAP	0.0070	0.0200	X	16.1	mg/L	1	02/06/2018 17:56	138712
Lead	NELAP	0.0060	0.0070	X	0.0090	mg/L	1	02/06/2018 17:56	138712
Manganese	NELAP	0.0016	0.0050	X	0.300	mg/L	1	02/06/2018 17:56	138712
Nickel	NELAP	0.0033	0.0100		0.0123	mg/L	1	02/06/2018 17:56	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 17:56	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 17:56	138712
Zinc	NELAP	0.0021	0.0100		0.0315	mg/L	1	02/06/2018 17:56	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0005	mg/L	5	02/06/2018 15:37	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 15:37	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 10:30	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.50	5.00		< 5.00	mg/Kg-dry	1	02/05/2018 13:07	138658
Arsenic	NELAP	0.94	2.36		8.62	mg/Kg-dry	1	02/05/2018 18:21	138654
Barium	NELAP	0.09	0.24		116	mg/Kg-dry	1	02/05/2018 18:21	138654
Beryllium	NELAP	0.03	0.05		0.81	mg/Kg-dry	1	02/05/2018 18:21	138654
Boron	NELAP	0.47	1.89		3.92	mg/Kg-dry	1	02/05/2018 18:21	138654
Cadmium	NELAP	0.05	0.19	J	0.10	mg/Kg-dry	1	02/05/2018 18:21	138654
Chromium	NELAP	0.19	0.47	X	22.6	mg/Kg-dry	1	02/05/2018 18:21	138654
Cobalt	NELAP	0.19	0.47		10.4	mg/Kg-dry	1	02/05/2018 18:21	138654
Copper	NELAP	0.14	0.47		13.7	mg/Kg-dry	1	02/05/2018 18:21	138654
Iron	NELAP	0.94	1.89	X	21400	mg/Kg-dry	1	02/05/2018 18:21	138654
Lead	NELAP	0.47	1.42		14.7	mg/Kg-dry	1	02/05/2018 18:21	138654
Magnesium	NELAP	0.38	4.72		6280	mg/Kg-dry	1	02/05/2018 18:21	138654
Manganese	NELAP	0.07	0.28	X	810	mg/Kg-dry	1	02/05/2018 18:21	138654
Nickel	NELAP	0.19	0.47		19.2	mg/Kg-dry	1	02/05/2018 18:21	138654

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-007

Client Sample ID: 2291V-4-B05

Matrix: SOLID

Collection Date: 01/31/2018 10:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/05/2018 18:21	138654
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/05/2018 18:21	138654
Vanadium	NELAP	0.19	0.94		42.0	mg/Kg-dry	1	02/05/2018 18:21	138654
Zinc	NELAP	0.38	0.94		49.8	mg/Kg-dry	1	02/05/2018 18:21	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/05/2018 22:26	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.030	mg/Kg-dry	1	02/06/2018 10:01	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.167	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
1,2-Dichlorobenzene	NELAP	0.199	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
1,3-Dichlorobenzene	NELAP	0.210	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
1,4-Dichlorobenzene	NELAP	0.199	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,4,5-Trichlorophenol	NELAP	0.138	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,4,6-Trichlorophenol	NELAP	0.158	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,4-Dichlorophenol	NELAP	0.152	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,4-Dimethylphenol	NELAP	0.159	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,4-Dinitrotoluene	NELAP	0.130	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2,6-Dinitrotoluene	NELAP	0.135	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2-Chloronaphthalene	NELAP	0.150	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2-Chlorophenol	NELAP	0.159	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2-Methylnaphthalene	NELAP	0.149	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
2-Nitrophenol	NELAP	0.140	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
3,3'-Dichlorobenzidine	NELAP	0.251	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
3-Nitroaniline	NELAP	0.188	1.25		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4-Bromophenyl phenyl ether	NELAP	0.115	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4-Chloro-3-methylphenol	NELAP	0.138	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4-Chloroaniline	NELAP	0.188	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4-Chlorophenyl phenyl ether	NELAP	0.124	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4-Nitroaniline	NELAP	0.188	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
4-Nitrophenol	NELAP	0.150	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Bis(2-chloroethoxy)methane	NELAP	0.147	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Bis(2-chloroethyl)ether	NELAP	0.178	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Bis(2-chloroisopropyl)ether	NELAP	0.143	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.147	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Butyl benzyl phthalate	NELAP	0.127	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-007

Client Sample ID: 2291V-4-B05

Matrix: SOLID

Collection Date: 01/31/2018 10:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.153	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Dibenzofuran	NELAP	0.188	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Diethyl phthalate	NELAP	0.120	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Dimethyl phthalate	NELAP	0.114	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Di-n-butyl phthalate	NELAP	0.129	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Di-n-octyl phthalate	NELAP	0.130	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Fluoranthene	NELAP	0.021	0.043	J	0.021	mg/Kg-dry	1	02/07/2018 18:41	138762
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Hexachlorobenzene	NELAP	0.209	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Hexachlorobutadiene	NELAP	0.194	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Hexachlorocyclopentadiene	NELAP	0.128	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Hexachloroethane	NELAP	0.209	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Isophorone	NELAP	0.148	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
m,p-Cresol	NELAP	0.158	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Nitrobenzene	NELAP	0.157	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
N-Nitroso-di-n-propylamine	NELAP	0.138	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
N-Nitrosodiphenylamine	NELAP	0.115	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
o-Cresol	NELAP	0.148	0.626		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Pentachlorophenol	NELAP	0.827	2.51		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Phenol	NELAP	0.145	0.438		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/07/2018 18:41	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		68.2	%REC	1	02/07/2018 18:41	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		58.1	%REC	1	02/07/2018 18:41	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		55.9	%REC	1	02/07/2018 18:41	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		49.1	%REC	1	02/07/2018 18:41	138762
Surr: Phenol-d5	*	0	38.8-103		57.5	%REC	1	02/07/2018 18:41	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		71.7	%REC	1	02/07/2018 18:41	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,1,2-Trichloroethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,1-Dichloroethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,1-Dichloroethene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,2-Dichloroethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,2-Dichloropropane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
1,3-Dichloropropene, Total	*	0.00108	0.0043		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
2-Butanone	NELAP	0.135	0.216		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
2-Hexanone	NELAP	0.0108	0.0539		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
4-Methyl-2-pentanone	NELAP	0.0108	0.0539		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Acetone	NELAP	0.0178	0.0539		0.0923	mg/Kg-dry	1	02/03/2018 3:12	138663
Benzene	NELAP	0.00054	0.0011		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Bromodichloromethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020045

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020045-007

Client Sample ID: 2291V-4-B05

Matrix: SOLID

Collection Date: 01/31/2018 10:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Bromomethane	NELAP	0.00270	0.0108		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Carbon disulfide	NELAP	0.00324	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Carbon tetrachloride	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Chlorobenzene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Chloroethane	NELAP	0.00216	0.0108		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Chloroform	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Chloromethane	NELAP	0.00216	0.0108		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
cis-1,2-Dichloroethene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
cis-1,3-Dichloropropene	NELAP	0.00108	0.0043		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Dibromochloromethane	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Ethylbenzene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
m,p-Xylenes	NELAP	0.00216	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Methyl tert-butyl ether	NELAP	0.00054	0.0022		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Methylene chloride	NELAP	0.00143	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
o-Xylene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Styrene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Tetrachloroethene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Toluene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
trans-1,2-Dichloroethene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
trans-1,3-Dichloropropene	NELAP	0.00108	0.0043		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Trichloroethene	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Vinyl acetate	NELAP	0.0216	0.0539		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Vinyl chloride	NELAP	0.00054	0.0022		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Xylenes, Total	NELAP	0.00108	0.0054		ND	mg/Kg-dry	1	02/03/2018 3:12	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		113.2	%REC	1	02/03/2018 3:12	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		98.6	%REC	1	02/03/2018 3:12	138663
Surr: Dibromofluoromethane	*	0	77.7-120		103.2	%REC	1	02/03/2018 3:12	138663
Surr: Toluene-d8	*	0	86-116		93.5	%REC	1	02/03/2018 3:12	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*

## CHAIN OF CUSTODY RECORD

<b>Client Contact</b>	<b>Laboratory</b>	Project Name: <u>IL 173 McHenry Co</u>	COC No.: <u>1</u> of <u>4</u>
Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	Lab: <b>TekLab, Inc.</b> Address: <b>5445 Horseshoe Lake Road</b> <b>Collinsville, IL 62234</b> Phone: <b>877-344-1003</b> Contact: <b>Shelly Hennessy</b> email: shennessy@teklabinc.com	Project No.: <u>PTA 184-000, DIA AE7-01A</u> TAT: <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other	Lab Job No.: <u>18020045</u>
<b>Special Instructions:</b> See Table 2 for complete parameter lists and minimum reporting limits. * If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal. ** If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.			Sample Temp: <u>1.82° C</u>
		<b>Analyses</b>	<b>Matrix Key:</b>

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	ANALYSES											Comments		
					VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization		Cyanide	
18020045-001	2291V-4-B01	1/31/18	1335	S	X	X						X	X	X	X	X		
-002	2291V-4-B02	1/31/18	1155															
-003	2291V-4-B03	1/31/18	1130															
-004	2291V-4-B03 Dup	1/31/18	1140															
-005	2291V-4-B04-1	1/31/18	1106															
-006	2291V-4-B04-2	1/31/18	1110															
-007	2291V-4-B05	1/31/18	1035															
-008	2291V-4-B06	1/31/18	1030	↓	↓	↓					↓	↓	↓	↓	↓	↓		
-009	Trip Blank 1	1/31/18	1335		X													

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/1/18 0800</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/1/18 11:50</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/1/18 16:40</u>	Received by: <u>[Signature]</u> Fed Ex	Date/Time: <u>2/2/18 1050</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:

[Signature]  
2/1/18





# Illinois Environmental Protection Agency

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

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

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

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

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

### I. Source Location Information

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

Project Name: FAP 303 (IL 173) Office Phone Number, if available: \_\_\_\_\_

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

28000 block of West IL 173 (Southwest Quadrant of Wilmot Road and IL 173)

City: Fox Lake State: IL Zip Code: 60081

County: McHenry Township: Burton

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

Latitude: 42.48076 Longitude: -88.20778

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: 1114200001 BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

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

Project Name: FAP 303 (IL 173)

Latitude: 42.48076 Longitude: -88.20778

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and approximately located 35 Ill. Adm. Code 1100.610(a):

LOCATIONS 2291V-5-B02 THROUGH -B05 WERE SAMPLED ADJACENT TO SITE 2291V-5. SEE TABLE 3c AND FIGURES 2 AND 3 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

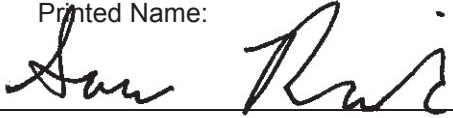
TEKLAB INC. ANALYTICAL REPORT - WORK ORDER: 18020046  
 TESTAMERICA ANALYTICAL REPORT - JOB ID NUMBER: 500-145720-2

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

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

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

Company Name: Andrews Engineering, Inc.  
 Street Address: 420 Eisenhower Lane North  
 City: Lombard State: IL Zip Code: 60148  
 Phone: 630-953-3332

Savo Radulovic  
 Printed Name:  
  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

June 15, 2018  
 Date:



The following table summarizes the results of laboratory analysis of site soil samples. In reading the table,

- Only parameters reported at concentrations above the most stringent MAC are listed.
- Samples with the notation “**No Contaminants of Concern Noted**” were below the most stringent MAC.

The laboratory report for site soils follows this summary table.

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Volatile Organic Compounds (mg/kg)</b>
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichloropropene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether (MTBE)
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl acetate
Vinyl chloride
Xylenes, total
<b>Semivolatile Organic Compounds (mg/kg)</b>
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Methylphenol
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo(a,h)anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
<b>Inorganic Compounds, Total (mg/kg)</b>
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc
Cyanide
<b>TCLP/SPLP Inorganics (mg/L)</b>
Antimony
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Iron
Lead
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide

**ISGS Site 2291V-5  
Thelen Excavating**

Sample ID	2291V-5-B02	2291V-5-B03	2291V-5-B04	2291V-5-B05	Maximum Allowable Concentration						
Sample Depth (ft)	0-3	0-3	0-3	0-3	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area		
Sample Date	1/31/2018	1/31/2018	1/31/2018	1/31/2018							
PID	0	0	0	0							
Sample pH	7.89	8.04	7.67	8.02							
Matrix	Soil	Soil	Soil	Soil							
Inorganic Compounds, Total (mg/kg)											
Arsenic	8.99	11.9	1.3	7.51	7.3	11.3	--	11.3	--	13	

February 13, 2018

Colleen Grey  
Andrews Engineering, Inc.  
3300 Ginger Creek Drive  
Springfield, IL 62711-7233  
TEL: (217) 787-2334  
FAX: (217) 787-9495



**RE:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**WorkOrder:** 18020046

Dear Colleen Grey:

TEKLAB, INC received 7 samples on 2/1/2018 11:50:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Shelly A. Hennessy  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



**Client:** Andrews Engineering, Inc.

**Work Order:** 18020046

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 13-Feb-18

### Abbr Definition

\* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.

DNI Did not ignite

DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

# - Unknown hydrocarbon

E - Value above quantitation range

I - Associated internal standard was outside method criteria

M - Manual Integration used to determine area response

R - RPD outside accepted recovery limits

T - TIC(Tentatively identified compound)

B - Analyte detected in associated Method Blank

H - Holding times exceeded

J - Analyte detected below quantitation limits

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside recovery limits

X - Value exceeds Maximum Contaminant Level



## Accreditations

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020046

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 13-Feb-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-003

Client Sample ID: 2291V-5-B02

Matrix: SOLID

Collection Date: 01/31/2018 12:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.7</b>	%	1	02/02/2018 16:07	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.3</b>	%	1	02/02/2018 16:07	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.29	J	<b>0.12</b>	mg/Kg-dry	1	02/07/2018 14:22	138741
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>7.89</b>		1	02/02/2018 18:47	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.131</b>	mg/L	1	02/12/2018 14:21	138849
Manganese	NELAP	0.0016	0.0050		<b>0.0147</b>	mg/L	1	02/09/2018 17:58	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 18:11	138712
Barium	NELAP	0.0200	0.0500		<b>0.139</b>	mg/L	1	02/06/2018 18:11	138712
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0006</b>	mg/L	1	02/06/2018 18:11	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 18:11	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 18:11	138712
Chromium	NELAP	0.0040	0.0100		<b>0.0157</b>	mg/L	1	02/06/2018 18:11	138712
Cobalt	NELAP	0.0022	0.0100	J	<b>0.0033</b>	mg/L	1	02/06/2018 18:11	138712
Iron	NELAP	0.0070	0.0200	X	<b>14.2</b>	mg/L	1	02/06/2018 18:11	138712
Lead	NELAP	0.0060	0.0070	J	<b>0.0068</b>	mg/L	1	02/06/2018 18:11	138712
Manganese	NELAP	0.0016	0.0050	X	<b>0.230</b>	mg/L	1	02/06/2018 18:11	138712
Nickel	NELAP	0.0033	0.0100		<b>0.0110</b>	mg/L	1	02/06/2018 18:11	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 18:11	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 18:11	138712
Zinc	NELAP	0.0021	0.0100		<b>0.0253</b>	mg/L	1	02/06/2018 18:11	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0004</b>	mg/L	5	02/06/2018 16:27	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 16:27	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 10:48	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.42	4.72		<b>&lt; 4.72</b>	mg/Kg-dry	1	02/05/2018 13:33	138658
Arsenic	NELAP	0.98	2.45		<b>8.99</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Barium	NELAP	0.10	0.25		<b>129</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Beryllium	NELAP	0.03	0.05		<b>0.81</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Boron	NELAP	0.49	1.96		<b>3.74</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Cadmium	NELAP	0.05	0.20	J	<b>0.10</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Chromium	NELAP	0.20	0.49	X	<b>23.9</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Cobalt	NELAP	0.20	0.49		<b>11.1</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Copper	NELAP	0.15	0.49		<b>16.1</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Iron	NELAP	0.98	1.96	X	<b>23600</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Lead	NELAP	0.49	1.47		<b>14.7</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Magnesium	NELAP	0.39	4.90		<b>3660</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Manganese	NELAP	0.07	0.29	X	<b>838</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Nickel	NELAP	0.20	0.49		<b>21.9</b>	mg/Kg-dry	1	02/05/2018 18:35	138654
Silver	NELAP	0.15	0.49		<b>&lt; 0.49</b>	mg/Kg-dry	1	02/05/2018 18:35	138654

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-003

Client Sample ID: 2291V-5-B02

Matrix: SOLID

Collection Date: 01/31/2018 12:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/05/2018 18:35	138654
Vanadium	NELAP	0.20	0.98		42.6	mg/Kg-dry	1	02/05/2018 18:35	138654
Zinc	NELAP	0.39	0.98		50.9	mg/Kg-dry	1	02/05/2018 18:35	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98		< 0.98	mg/Kg-dry	10	02/06/2018 0:05	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.026	mg/Kg-dry	1	02/06/2018 10:15	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
1,2-Dichlorobenzene	NELAP	0.199	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
1,3-Dichlorobenzene	NELAP	0.210	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
1,4-Dichlorobenzene	NELAP	0.199	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,4,5-Trichlorophenol	NELAP	0.137	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,4,6-Trichlorophenol	NELAP	0.157	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,4-Dichlorophenol	NELAP	0.151	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,4-Dimethylphenol	NELAP	0.159	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,4-Dinitrotoluene	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2,6-Dinitrotoluene	NELAP	0.135	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2-Chloronaphthalene	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2-Chlorophenol	NELAP	0.159	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2-Methylnaphthalene	NELAP	0.149	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
2-Nitrophenol	NELAP	0.140	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
3,3'-Dichlorobenzidine	NELAP	0.250	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
3-Nitroaniline	NELAP	0.187	1.25		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4-Bromophenyl phenyl ether	NELAP	0.115	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4-Chloro-3-methylphenol	NELAP	0.137	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4-Chloroaniline	NELAP	0.187	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4-Chlorophenyl phenyl ether	NELAP	0.124	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4-Nitroaniline	NELAP	0.187	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
4-Nitrophenol	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Bis(2-chloroethoxy)methane	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Bis(2-chloroethyl)ether	NELAP	0.177	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Bis(2-chloroisopropyl)ether	NELAP	0.142	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Butyl benzyl phthalate	NELAP	0.126	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Carbazole	NELAP	0.152	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-003

Client Sample ID: 2291V-5-B02

Matrix: SOLID

Collection Date: 01/31/2018 12:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Dibenzofuran	NELAP	0.187	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Diethyl phthalate	NELAP	0.120	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Dimethyl phthalate	NELAP	0.114	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Di-n-butyl phthalate	NELAP	0.129	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Di-n-octyl phthalate	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Hexachlorobenzene	NELAP	0.209	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Hexachlorobutadiene	NELAP	0.194	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Hexachlorocyclopentadiene	NELAP	0.127	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Hexachloroethane	NELAP	0.209	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Isophorone	NELAP	0.147	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
m,p-Cresol	NELAP	0.157	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Nitrobenzene	NELAP	0.156	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
N-Nitroso-di-n-propylamine	NELAP	0.137	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
N-Nitrosodiphenylamine	NELAP	0.115	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
o-Cresol	NELAP	0.147	0.625		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Pentachlorophenol	NELAP	0.825	2.50		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Phenol	NELAP	0.145	0.437		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 10:46	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		67.9	%REC	1	02/07/2018 10:46	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		60.2	%REC	1	02/07/2018 10:46	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		60.7	%REC	1	02/07/2018 10:46	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		53.3	%REC	1	02/07/2018 10:46	138762
Surr: Phenol-d5	*	0	38.8-103		62.4	%REC	1	02/07/2018 10:46	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		71.9	%REC	1	02/07/2018 10:46	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,1,2-Trichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,1-Dichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,1-Dichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,2-Dichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,2-Dichloropropane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
1,3-Dichloropropene, Total	*	0.00094	0.0038		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
2-Butanone	NELAP	0.118	0.189		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
2-Hexanone	NELAP	0.00945	0.0473		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
4-Methyl-2-pentanone	NELAP	0.00945	0.0473		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Acetone	NELAP	0.0156	0.0473		0.0945	mg/Kg-dry	1	02/03/2018 4:57	138663
Benzene	NELAP	0.00047	0.0009		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Bromodichloromethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Bromoform	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-003

Client Sample ID: 2291V-5-B02

Matrix: SOLID

Collection Date: 01/31/2018 12:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromomethane	NELAP	0.00236	0.0094		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Carbon disulfide	NELAP	0.00284	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Carbon tetrachloride	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Chlorobenzene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Chloroethane	NELAP	0.00189	0.0094		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Chloroform	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Chloromethane	NELAP	0.00189	0.0094		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
cis-1,2-Dichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
cis-1,3-Dichloropropene	NELAP	0.00094	0.0038		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Dibromochloromethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Ethylbenzene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
m,p-Xylenes	NELAP	0.00189	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Methyl tert-butyl ether	NELAP	0.00047	0.0019		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Methylene chloride	NELAP	0.00126	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
o-Xylene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Styrene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Tetrachloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Toluene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
trans-1,2-Dichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
trans-1,3-Dichloropropene	NELAP	0.00094	0.0038		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Trichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Vinyl acetate	NELAP	0.0189	0.0473		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Vinyl chloride	NELAP	0.00047	0.0019		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Xylenes, Total	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 4:57	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		113.1	%REC	1	02/03/2018 4:57	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		96.8	%REC	1	02/03/2018 4:57	138663
Surr: Dibromofluoromethane	*	0	77.7-120		104.2	%REC	1	02/03/2018 4:57	138663
Surr: Toluene-d8	*	0	86-116		93.4	%REC	1	02/03/2018 4:57	138663

LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-004

Client Sample ID: 2291V-5-B03

Matrix: SOLID

Collection Date: 01/31/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		17.8	%	1	02/02/2018 16:07	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		82.2	%	1	02/02/2018 16:07	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30	J	0.15	mg/Kg-dry	1	02/07/2018 14:31	138741
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.04		1	02/02/2018 18:50	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.268	mg/L	1	02/12/2018 14:28	138849
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/09/2018 18:05	138849
Manganese	NELAP	0.0016	0.0050		0.0190	mg/L	1	02/09/2018 18:05	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 18:22	138712
Barium	NELAP	0.0200	0.0500		0.153	mg/L	1	02/06/2018 18:22	138712
Beryllium	NELAP	0.0003	0.0010	J	0.0008	mg/L	1	02/06/2018 18:22	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 18:22	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 18:22	138712
Chromium	NELAP	0.0040	0.0100		0.0182	mg/L	1	02/06/2018 18:22	138712
Cobalt	NELAP	0.0022	0.0100	J	0.0043	mg/L	1	02/06/2018 18:22	138712
Iron	NELAP	0.0070	0.0200	X	16.9	mg/L	1	02/06/2018 18:22	138712
Lead	NELAP	0.0060	0.0070	X	0.0077	mg/L	1	02/06/2018 18:22	138712
Manganese	NELAP	0.0016	0.0050	X	0.273	mg/L	1	02/06/2018 18:22	138712
Nickel	NELAP	0.0033	0.0100		0.0147	mg/L	1	02/06/2018 18:22	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 18:22	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 18:22	138712
Zinc	NELAP	0.0021	0.0100		0.0294	mg/L	1	02/06/2018 18:22	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0004	mg/L	5	02/06/2018 16:35	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 16:35	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 10:51	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.50	5.00		< 5.00	mg/Kg-dry	1	02/05/2018 13:37	138658
Arsenic	NELAP	0.98	2.45	X	11.9	mg/Kg-dry	1	02/05/2018 18:50	138654
Barium	NELAP	0.10	0.25		143	mg/Kg-dry	1	02/05/2018 18:50	138654
Beryllium	NELAP	0.03	0.05		1.04	mg/Kg-dry	1	02/05/2018 18:50	138654
Boron	NELAP	0.49	1.96		4.75	mg/Kg-dry	1	02/05/2018 18:50	138654
Cadmium	NELAP	0.05	0.20	J	0.15	mg/Kg-dry	1	02/05/2018 18:50	138654
Chromium	NELAP	0.20	0.49	X	27.8	mg/Kg-dry	1	02/05/2018 18:50	138654
Cobalt	NELAP	0.20	0.49		12.3	mg/Kg-dry	1	02/05/2018 18:50	138654
Copper	NELAP	0.15	0.49		23.8	mg/Kg-dry	1	02/05/2018 18:50	138654
Iron	NELAP	0.98	1.96	X	28800	mg/Kg-dry	1	02/05/2018 18:50	138654
Lead	NELAP	0.49	1.47		15.5	mg/Kg-dry	1	02/05/2018 18:50	138654
Magnesium	NELAP	0.39	4.90		4570	mg/Kg-dry	1	02/05/2018 18:50	138654
Manganese	NELAP	0.07	0.29	X	907	mg/Kg-dry	1	02/05/2018 18:50	138654
Nickel	NELAP	0.20	0.49		30.4	mg/Kg-dry	1	02/05/2018 18:50	138654

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-004

Client Sample ID: 2291V-5-B03

Matrix: SOLID

Collection Date: 01/31/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.15	0.49		< 0.49	mg/Kg-dry	1	02/05/2018 18:50	138654
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/05/2018 18:50	138654
Vanadium	NELAP	0.20	0.98		51.3	mg/Kg-dry	1	02/05/2018 18:50	138654
Zinc	NELAP	0.39	0.98		60.2	mg/Kg-dry	1	02/05/2018 18:50	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98		< 0.98	mg/Kg-dry	10	02/06/2018 0:13	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.044	mg/Kg-dry	1	02/06/2018 10:17	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.158	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
1,2-Dichlorobenzene	NELAP	0.189	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
1,3-Dichlorobenzene	NELAP	0.200	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
1,4-Dichlorobenzene	NELAP	0.189	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,4,5-Trichlorophenol	NELAP	0.131	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,4,6-Trichlorophenol	NELAP	0.150	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,4-Dichlorophenol	NELAP	0.144	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,4-Dimethylphenol	NELAP	0.151	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,4-Dinitrophenol	NELAP	0.127	1.19		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,4-Dinitrotoluene	NELAP	0.124	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2,6-Dinitrotoluene	NELAP	0.128	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2-Chloronaphthalene	NELAP	0.143	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2-Chlorophenol	NELAP	0.151	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2-Methylnaphthalene	NELAP	0.142	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2-Nitroaniline	NELAP	0.190	1.19		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
2-Nitrophenol	NELAP	0.133	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
3,3'-Dichlorobenzidine	NELAP	0.238	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
3-Nitroaniline	NELAP	0.178	1.19		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4,6-Dinitro-2-methylphenol	NELAP	0.128	1.19		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4-Bromophenyl phenyl ether	NELAP	0.109	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4-Chloro-3-methylphenol	NELAP	0.131	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4-Chloroaniline	NELAP	0.178	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4-Chlorophenyl phenyl ether	NELAP	0.118	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4-Nitroaniline	NELAP	0.178	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
4-Nitrophenol	NELAP	0.143	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Acenaphthene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Acenaphthylene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Anthracene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Benzo(a)anthracene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Benzo(a)pyrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Benzo(b)fluoranthene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Benzo(g,h,i)perylene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Benzo(k)fluoranthene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Bis(2-chloroethoxy)methane	NELAP	0.139	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Bis(2-chloroethyl)ether	NELAP	0.169	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Bis(2-chloroisopropyl)ether	NELAP	0.136	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.139	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Butyl benzyl phthalate	NELAP	0.120	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762



Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-004

Client Sample ID: 2291V-5-B03

Matrix: SOLID

Collection Date: 01/31/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.145	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Chrysene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Dibenzo(a,h)anthracene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Dibenzofuran	NELAP	0.178	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Diethyl phthalate	NELAP	0.114	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Dimethyl phthalate	NELAP	0.108	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Di-n-butyl phthalate	NELAP	0.122	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Di-n-octyl phthalate	NELAP	0.124	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Fluoranthene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Fluorene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Hexachlorobenzene	NELAP	0.199	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Hexachlorobutadiene	NELAP	0.184	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Hexachlorocyclopentadiene	NELAP	0.121	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Hexachloroethane	NELAP	0.199	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Isophorone	NELAP	0.140	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
m,p-Cresol	NELAP	0.150	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Naphthalene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Nitrobenzene	NELAP	0.149	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
N-Nitroso-di-n-propylamine	NELAP	0.131	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
N-Nitrosodiphenylamine	NELAP	0.109	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
o-Cresol	NELAP	0.140	0.595		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Pentachlorophenol	NELAP	0.785	2.38		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Phenanthrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Phenol	NELAP	0.138	0.416		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Pyrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 11:14	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		69.2	%REC	1	02/07/2018 11:14	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		59.4	%REC	1	02/07/2018 11:14	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		57.8	%REC	1	02/07/2018 11:14	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		53.9	%REC	1	02/07/2018 11:14	138762
Surr: Phenol-d5	*	0	38.8-103		59.4	%REC	1	02/07/2018 11:14	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		71.0	%REC	1	02/07/2018 11:14	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,1,2-Trichloroethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,1-Dichloroethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,1-Dichloroethene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,2-Dichloroethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,2-Dichloropropane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
1,3-Dichloropropene, Total	*	0.00087	0.0035		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
2-Butanone	NELAP	0.109	0.175		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
2-Hexanone	NELAP	0.00874	0.0437		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
4-Methyl-2-pentanone	NELAP	0.00874	0.0437		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Acetone	NELAP	0.0144	0.0437		0.0972	mg/Kg-dry	1	02/03/2018 5:23	138663
Benzene	NELAP	0.00044	0.0009		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Bromodichloromethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-004

Client Sample ID: 2291V-5-B03

Matrix: SOLID

Collection Date: 01/31/2018 12:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Bromomethane	NELAP	0.00219	0.0087		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Carbon disulfide	NELAP	0.00262	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Carbon tetrachloride	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Chlorobenzene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Chloroethane	NELAP	0.00175	0.0087		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Chloroform	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Chloromethane	NELAP	0.00175	0.0087		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
cis-1,2-Dichloroethene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
cis-1,3-Dichloropropene	NELAP	0.00087	0.0035		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Dibromochloromethane	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Ethylbenzene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
m,p-Xylenes	NELAP	0.00175	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Methyl tert-butyl ether	NELAP	0.00044	0.0018		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Methylene chloride	NELAP	0.00116	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
o-Xylene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Styrene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Tetrachloroethene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Toluene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
trans-1,2-Dichloroethene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
trans-1,3-Dichloropropene	NELAP	0.00087	0.0035		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Trichloroethene	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Vinyl acetate	NELAP	0.0175	0.0437		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Vinyl chloride	NELAP	0.00044	0.0018		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Xylenes, Total	NELAP	0.00087	0.0044		ND	mg/Kg-dry	1	02/03/2018 5:23	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.0	%REC	1	02/03/2018 5:23	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		99.6	%REC	1	02/03/2018 5:23	138663
Surr: Dibromofluoromethane	*	0	77.7-120		104.8	%REC	1	02/03/2018 5:23	138663
Surr: Toluene-d8	*	0	86-116		92.9	%REC	1	02/03/2018 5:23	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-005

Client Sample ID: 2291V-5-B04

Matrix: SOLID

Collection Date: 01/31/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.1</b>	%	1	02/02/2018 16:08	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.9</b>	%	1	02/02/2018 16:08	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30	J	<b>0.28</b>	mg/Kg-dry	1	02/07/2018 14:36	138741
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>7.67</b>		1	02/02/2018 18:52	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.0341</b>	mg/L	1	02/12/2018 14:32	138849
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/09/2018 18:09	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 18:26	138712
Barium	NELAP	0.0200	0.0500		<b>0.110</b>	mg/L	1	02/06/2018 18:26	138712
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0004</b>	mg/L	1	02/06/2018 18:26	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 18:26	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 18:26	138712
Chromium	NELAP	0.0040	0.0100	J	<b>0.0091</b>	mg/L	1	02/06/2018 18:26	138712
Cobalt	NELAP	0.0022	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 18:26	138712
Iron	NELAP	0.0070	0.0200	X	<b>6.89</b>	mg/L	1	02/06/2018 18:26	138712
Lead	NELAP	0.0060	0.0070	X	<b>0.0147</b>	mg/L	1	02/06/2018 18:26	138712
Manganese	NELAP	0.0016	0.0050		<b>0.0773</b>	mg/L	1	02/06/2018 18:26	138712
Nickel	NELAP	0.0033	0.0100	J	<b>0.0056</b>	mg/L	1	02/06/2018 18:26	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 18:26	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 18:26	138712
Zinc	NELAP	0.0021	0.0100		<b>0.0253</b>	mg/L	1	02/06/2018 18:26	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMs</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0003</b>	mg/L	5	02/06/2018 16:43	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 16:43	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 10:53	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		<b>&lt; 4.63</b>	mg/Kg-dry	1	02/05/2018 13:40	138658
Arsenic	NELAP	0.94	2.36		<b>7.51</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Barium	NELAP	0.09	0.24		<b>162</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Beryllium	NELAP	0.03	0.05		<b>0.65</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Boron	NELAP	0.47	1.89		<b>5.71</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Cadmium	NELAP	0.05	0.19		<b>0.46</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Chromium	NELAP	0.19	0.47	X	<b>17.9</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Cobalt	NELAP	0.19	0.47		<b>8.12</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Copper	NELAP	0.14	0.47		<b>16.4</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Iron	NELAP	0.94	1.89	X	<b>17800</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Lead	NELAP	0.47	1.42		<b>57.9</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Magnesium	NELAP	0.38	4.72		<b>14100</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Manganese	NELAP	0.07	0.28	X	<b>1070</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Nickel	NELAP	0.19	0.47		<b>15.9</b>	mg/Kg-dry	1	02/05/2018 18:54	138654
Silver	NELAP	0.14	0.47		<b>&lt; 0.47</b>	mg/Kg-dry	1	02/05/2018 18:54	138654

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-005

Client Sample ID: 2291V-5-B04

Matrix: SOLID

Collection Date: 01/31/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/05/2018 18:54	138654
Vanadium	NELAP	0.19	0.94		31.9	mg/Kg-dry	1	02/05/2018 18:54	138654
Zinc	NELAP	0.38	0.94		82.7	mg/Kg-dry	1	02/05/2018 18:54	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/06/2018 0:21	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.051	mg/Kg-dry	1	02/06/2018 10:24	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	3.21	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
1,2-Dichlorobenzene	NELAP	3.84	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
1,3-Dichlorobenzene	NELAP	4.05	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
1,4-Dichlorobenzene	NELAP	3.84	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,4,5-Trichlorophenol	NELAP	2.65	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,4,6-Trichlorophenol	NELAP	3.04	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,4-Dichlorophenol	NELAP	2.92	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,4-Dimethylphenol	NELAP	3.06	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,4-Dinitrophenol	NELAP	2.58	24.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,4-Dinitrotoluene	NELAP	2.51	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2,6-Dinitrotoluene	NELAP	2.61	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2-Chloronaphthalene	NELAP	2.90	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2-Chlorophenol	NELAP	3.06	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2-Methylnaphthalene	NELAP	2.87	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2-Nitroaniline	NELAP	3.86	24.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
2-Nitrophenol	NELAP	2.70	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
3,3'-Dichlorobenzidine	NELAP	4.83	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
3-Nitroaniline	NELAP	3.62	24.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4,6-Dinitro-2-methylphenol	NELAP	2.61	24.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4-Bromophenyl phenyl ether	NELAP	2.22	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4-Chloro-3-methylphenol	NELAP	2.65	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4-Chloroaniline	NELAP	3.62	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4-Chlorophenyl phenyl ether	NELAP	2.39	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4-Nitroaniline	NELAP	3.62	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
4-Nitrophenol	NELAP	2.90	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Acenaphthene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Acenaphthylene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Anthracene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Benzo(a)anthracene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Benzo(a)pyrene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Benzo(b)fluoranthene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Benzo(g,h,i)perylene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Benzo(k)fluoranthene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Bis(2-chloroethoxy)methane	NELAP	2.82	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Bis(2-chloroethyl)ether	NELAP	3.43	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Bis(2-chloroisopropyl)ether	NELAP	2.75	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Bis(2-ethylhexyl)phthalate	NELAP	2.82	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Butyl benzyl phthalate	NELAP	2.44	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Carbazole	NELAP	2.94	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-005

Client Sample ID: 2291V-5-B04

Matrix: SOLID

Collection Date: 01/31/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chrysene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Dibenzo(a,h)anthracene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Dibenzofuran	NELAP	3.62	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Diethyl phthalate	NELAP	2.32	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Dimethyl phthalate	NELAP	2.20	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Di-n-butyl phthalate	NELAP	2.49	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Di-n-octyl phthalate	NELAP	2.51	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Fluoranthene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Fluorene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Hexachlorobenzene	NELAP	4.03	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Hexachlorobutadiene	NELAP	3.74	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Hexachlorocyclopentadiene	NELAP	2.46	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Hexachloroethane	NELAP	4.03	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Isophorone	NELAP	2.85	8.44		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
m,p-Cresol	NELAP	3.04	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Naphthalene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Nitrobenzene	NELAP	3.02	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
N-Nitroso-di-n-propylamine	NELAP	2.65	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
N-Nitrosodiphenylamine	NELAP	2.22	12.1		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
o-Cresol	NELAP	2.85	12.1	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Pentachlorophenol	NELAP	15.9	48.3	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Phenanthrene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Phenol	NELAP	2.80	8.44	S	ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Pyrene	NELAP	0.403	0.820		ND	mg/Kg-dry	10	02/07/2018 17:17	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		57.5	%REC	10	02/07/2018 17:17	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		65.1	%REC	10	02/07/2018 17:17	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		52.9	%REC	10	02/07/2018 17:17	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		51.9	%REC	10	02/07/2018 17:17	138762
Surr: Phenol-d5	*	0	38.8-103		62.7	%REC	10	02/07/2018 17:17	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		73.5	%REC	10	02/07/2018 17:17	138762

Matrix spike did not recover within control limits due to sample dilution.

Elevated reporting limit due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,1,2-Trichloroethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,1-Dichloroethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,1-Dichloroethene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,2-Dichloroethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,2-Dichloropropane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
1,3-Dichloropropene, Total	*	0.00152	0.0061		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
2-Butanone	NELAP	0.190	0.304		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
2-Hexanone	NELAP	0.0152	0.0760		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
4-Methyl-2-pentanone	NELAP	0.0152	0.0760		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Acetone	NELAP	0.0251	0.0760		0.197	mg/Kg-dry	1	02/03/2018 5:50	138663
Benzene	NELAP	0.00076	0.0015		ND	mg/Kg-dry	1	02/03/2018 5:50	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-005

Client Sample ID: 2291V-5-B04

Matrix: SOLID

Collection Date: 01/31/2018 12:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromodichloromethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Bromoform	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Bromomethane	NELAP	0.00380	0.0152		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Carbon disulfide	NELAP	0.00456	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Carbon tetrachloride	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Chlorobenzene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Chloroethane	NELAP	0.00304	0.0152		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Chloroform	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Chloromethane	NELAP	0.00304	0.0152		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
cis-1,2-Dichloroethene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
cis-1,3-Dichloropropene	NELAP	0.00152	0.0061		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Dibromochloromethane	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Ethylbenzene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
m,p-Xylenes	NELAP	0.00304	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Methyl tert-butyl ether	NELAP	0.00076	0.0030		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Methylene chloride	NELAP	0.00202	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
o-Xylene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Styrene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Tetrachloroethene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Toluene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
trans-1,2-Dichloroethene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
trans-1,3-Dichloropropene	NELAP	0.00152	0.0061		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Trichloroethene	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Vinyl acetate	NELAP	0.0304	0.0760		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Vinyl chloride	NELAP	0.00076	0.0030		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Xylenes, Total	NELAP	0.00152	0.0076		ND	mg/Kg-dry	1	02/03/2018 5:50	138663
Surr: 1,2-Dichloroethane-d4	*		0 72.2-131		<b>115.1</b>	%REC	1	02/03/2018 5:50	138663
Surr: 4-Bromofluorobenzene	*		0 82.1-116		<b>107.7</b>	%REC	1	02/03/2018 5:50	138663
Surr: Dibromofluoromethane	*		0 77.7-120		<b>107.2</b>	%REC	1	02/03/2018 5:50	138663
Surr: Toluene-d8	*		0 86-116		<b>100.3</b>	%REC	1	02/03/2018 5:50	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-006

Client Sample ID: 2291V-5-B05

Matrix: SOLID

Collection Date: 01/31/2018 12:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		15.7	%	1	02/02/2018 16:08	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		84.3	%	1	02/02/2018 16:08	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.29	J	0.23	mg/Kg-dry	1	02/07/2018 14:40	138741
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.02		1	02/02/2018 18:54	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.0466	mg/L	1	02/12/2018 14:36	138849
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/09/2018 18:12	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 18:29	138712
Barium	NELAP	0.0200	0.0500		0.123	mg/L	1	02/06/2018 18:29	138712
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/06/2018 18:29	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 18:29	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 18:29	138712
Chromium	NELAP	0.0040	0.0100		0.0103	mg/L	1	02/06/2018 18:29	138712
Cobalt	NELAP	0.0022	0.0100	J	0.0026	mg/L	1	02/06/2018 18:29	138712
Iron	NELAP	0.0070	0.0200	X	8.02	mg/L	1	02/06/2018 18:29	138712
Lead	NELAP	0.0060	0.0070	X	0.0251	mg/L	1	02/06/2018 18:29	138712
Manganese	NELAP	0.0016	0.0050		0.108	mg/L	1	02/06/2018 18:29	138712
Nickel	NELAP	0.0033	0.0100	J	0.0065	mg/L	1	02/06/2018 18:29	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 18:29	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 18:29	138712
Zinc	NELAP	0.0021	0.0100		0.0289	mg/L	1	02/06/2018 18:29	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0003	mg/L	5	02/06/2018 16:51	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 16:51	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 10:55	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.36	4.55		< 4.55	mg/Kg-dry	1	02/05/2018 13:44	138658
Arsenic	NELAP	0.93	2.31		7.30	mg/Kg-dry	1	02/05/2018 18:57	138654
Barium	NELAP	0.09	0.23		116	mg/Kg-dry	1	02/05/2018 18:57	138654
Beryllium	NELAP	0.03	0.05		0.63	mg/Kg-dry	1	02/05/2018 18:57	138654
Boron	NELAP	0.46	1.85		4.99	mg/Kg-dry	1	02/05/2018 18:57	138654
Cadmium	NELAP	0.05	0.19		0.36	mg/Kg-dry	1	02/05/2018 18:57	138654
Chromium	NELAP	0.19	0.46	X	19.3	mg/Kg-dry	1	02/05/2018 18:57	138654
Cobalt	NELAP	0.19	0.46		8.11	mg/Kg-dry	1	02/05/2018 18:57	138654
Copper	NELAP	0.14	0.46		16.6	mg/Kg-dry	1	02/05/2018 18:57	138654
Iron	NELAP	0.93	1.85	X	17800	mg/Kg-dry	1	02/05/2018 18:57	138654
Lead	NELAP	0.46	1.39	X	118	mg/Kg-dry	1	02/05/2018 18:57	138654
Magnesium	NELAP	0.37	4.63		8500	mg/Kg-dry	1	02/05/2018 18:57	138654
Manganese	NELAP	0.06	0.28	X	717	mg/Kg-dry	1	02/05/2018 18:57	138654
Nickel	NELAP	0.19	0.46		16.4	mg/Kg-dry	1	02/05/2018 18:57	138654
Silver	NELAP	0.14	0.46		< 0.46	mg/Kg-dry	1	02/05/2018 18:57	138654

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-006

Client Sample ID: 2291V-5-B05

Matrix: SOLID

Collection Date: 01/31/2018 12:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Thallium	NELAP	1.39	2.41		< 2.41	mg/Kg-dry	1	02/05/2018 18:57	138654
Vanadium	NELAP	0.19	0.93		35.2	mg/Kg-dry	1	02/05/2018 18:57	138654
Zinc	NELAP	0.37	0.93		75.1	mg/Kg-dry	1	02/05/2018 18:57	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.37	0.93		< 0.93	mg/Kg-dry	10	02/06/2018 0:29	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.041	mg/Kg-dry	1	02/06/2018 10:26	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.158	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
1,2-Dichlorobenzene	NELAP	0.188	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
1,3-Dichlorobenzene	NELAP	0.199	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
1,4-Dichlorobenzene	NELAP	0.188	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,4,5-Trichlorophenol	NELAP	0.130	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,4,6-Trichlorophenol	NELAP	0.149	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,4-Dichlorophenol	NELAP	0.143	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,4-Dimethylphenol	NELAP	0.150	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,4-Dinitrophenol	NELAP	0.127	1.18		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,4-Dinitrotoluene	NELAP	0.123	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2,6-Dinitrotoluene	NELAP	0.128	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2-Chloronaphthalene	NELAP	0.142	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2-Chlorophenol	NELAP	0.150	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2-Methylnaphthalene	NELAP	0.141	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2-Nitroaniline	NELAP	0.189	1.18		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
2-Nitrophenol	NELAP	0.133	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
3,3'-Dichlorobenzidine	NELAP	0.237	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
3-Nitroaniline	NELAP	0.178	1.18		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4,6-Dinitro-2-methylphenol	NELAP	0.128	1.18		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4-Bromophenyl phenyl ether	NELAP	0.109	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4-Chloro-3-methylphenol	NELAP	0.130	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4-Chloroaniline	NELAP	0.178	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4-Chlorophenyl phenyl ether	NELAP	0.117	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4-Nitroaniline	NELAP	0.178	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
4-Nitrophenol	NELAP	0.142	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Acenaphthene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Acenaphthylene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Anthracene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Benzo(a)anthracene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Benzo(a)pyrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Benzo(b)fluoranthene	NELAP	0.020	0.040	J	0.028	mg/Kg-dry	1	02/07/2018 22:23	138762
Benzo(g,h,i)perylene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Benzo(k)fluoranthene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Bis(2-chloroethoxy)methane	NELAP	0.139	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Bis(2-chloroethyl)ether	NELAP	0.168	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Bis(2-chloroisopropyl)ether	NELAP	0.135	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.139	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Butyl benzyl phthalate	NELAP	0.120	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Carbazole	NELAP	0.144	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762



Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-006

Client Sample ID: 2291V-5-B05

Matrix: SOLID

Collection Date: 01/31/2018 12:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chrysene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Dibenzo(a,h)anthracene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Dibenzofuran	NELAP	0.178	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Diethyl phthalate	NELAP	0.114	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Dimethyl phthalate	NELAP	0.108	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Di-n-butyl phthalate	NELAP	0.122	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Di-n-octyl phthalate	NELAP	0.123	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Fluoranthene	NELAP	0.020	0.040	J	0.028	mg/Kg-dry	1	02/07/2018 22:23	138762
Fluorene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Hexachlorobenzene	NELAP	0.198	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Hexachlorobutadiene	NELAP	0.184	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Hexachlorocyclopentadiene	NELAP	0.121	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Hexachloroethane	NELAP	0.198	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Isophorone	NELAP	0.140	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
m,p-Cresol	NELAP	0.149	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Naphthalene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Nitrobenzene	NELAP	0.148	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
N-Nitroso-di-n-propylamine	NELAP	0.130	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
N-Nitrosodiphenylamine	NELAP	0.109	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
o-Cresol	NELAP	0.140	0.592		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Pentachlorophenol	NELAP	0.782	2.37		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Phenanthrene	NELAP	0.020	0.040		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Phenol	NELAP	0.137	0.414		ND	mg/Kg-dry	1	02/07/2018 22:23	138762
Pyrene	NELAP	0.020	0.040	J	0.032	mg/Kg-dry	1	02/07/2018 22:23	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		45.7	%REC	1	02/07/2018 22:23	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		42.2	%REC	1	02/07/2018 22:23	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		37.7	%REC	1	02/07/2018 22:23	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		38.6	%REC	1	02/07/2018 22:23	138762
Surr: Phenol-d5	*	0	38.8-103		40.2	%REC	1	02/07/2018 22:23	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		48.9	%REC	1	02/07/2018 22:23	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,1,2-Trichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,1-Dichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,1-Dichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,2-Dichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,2-Dichloropropane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
1,3-Dichloropropene, Total	*	0.00085	0.0034		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
2-Butanone	NELAP	0.106	0.170		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
2-Hexanone	NELAP	0.00848	0.0424		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
4-Methyl-2-pentanone	NELAP	0.00848	0.0424		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Acetone	NELAP	0.0140	0.0424		0.0577	mg/Kg-dry	1	02/03/2018 6:16	138663
Benzene	NELAP	0.00042	0.0008		0.0013	mg/Kg-dry	1	02/03/2018 6:16	138663
Bromodichloromethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Bromoform	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020046

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 13-Feb-18

Lab ID: 18020046-006

Client Sample ID: 2291V-5-B05

Matrix: SOLID

Collection Date: 01/31/2018 12:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromomethane	NELAP	0.00212	0.0085		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Carbon disulfide	NELAP	0.00254	0.0042	J	0.0041	mg/Kg-dry	1	02/03/2018 6:16	138663
Carbon tetrachloride	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Chlorobenzene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Chloroethane	NELAP	0.00170	0.0085		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Chloroform	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Chloromethane	NELAP	0.00170	0.0085		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
cis-1,2-Dichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
cis-1,3-Dichloropropene	NELAP	0.00085	0.0034		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Dibromochloromethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Ethylbenzene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
m,p-Xylenes	NELAP	0.00170	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Methyl tert-butyl ether	NELAP	0.00042	0.0017		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Methylene chloride	NELAP	0.00113	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
o-Xylene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Styrene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Tetrachloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Toluene	NELAP	0.00085	0.0042	J	0.0020	mg/Kg-dry	1	02/03/2018 6:16	138663
trans-1,2-Dichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
trans-1,3-Dichloropropene	NELAP	0.00085	0.0034		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Trichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Vinyl acetate	NELAP	0.0170	0.0424		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Vinyl chloride	NELAP	0.00042	0.0017		ND	mg/Kg-dry	1	02/03/2018 6:16	138663
Xylenes, Total	NELAP	0.00085	0.0042	J	0.0009	mg/Kg-dry	1	02/03/2018 6:16	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		115.1	%REC	1	02/03/2018 6:16	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		107.6	%REC	1	02/03/2018 6:16	138663
Surr: Dibromofluoromethane	*	0	77.7-120		106.9	%REC	1	02/03/2018 6:16	138663
Surr: Toluene-d8	*	0	86-116		97.3	%REC	1	02/03/2018 6:16	138663

LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

## CHAIN OF CUSTODY RECORD

<b>Client Contact</b>	<b>Laboratory</b>	Project Name: <u>IL173 Melherry Co</u>	COC No.: <u>2 of 4</u>
Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	Lab: <b>TekLab, Inc.</b> Address: <b>5445 Horseshoe Lake Road</b> <b>Collinsville, IL 62234</b> Phone: <b>877-344-1003</b> Contact: <b>Shelly Hennessy</b> email: <b>shennessy@teklabinc.com</b>	Project No.: <u>PTB 184-006, 01A AET-01A</u> TAT: <input checked="" type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other	Lab Job No.: <u>15020046</u>
<b>Special Instructions:</b> See Table 2 for complete parameter lists and minimum reporting limits. * If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal. ** If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.			Sample Temp: <u>2.48° ice</u>
		<b>Analyses</b>	<b>Matrix Key:</b>

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	ANALYSES												Comments	
					VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	Cyanide		
15020046-001	2291V-5-B01	1/31/18	1205	S	X	X						X	X	X	X		X	
-002	2291V-5-B01 NWP	1/31/18	1225	↓	↓	↓						↓	↓	↓	↓		↓	
-003	2291V-5-B02	1/31/18	1220	↓	↓	↓						↓	↓	↓	↓		↓	
-004	2291V-5-B03	1/31/18	1235	↓	↓	↓						↓	↓	↓	↓		↓	
-005	2291V-5-B04	1/31/18	1245	↓	↓	↓						↓	↓	↓	↓		↓	
-006	2291V-5-B05	1/31/18	1255	↓	↓	↓						↓	↓	↓	↓		↓	
-007	Trip Blank 2	1/31/18	1255		X													

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/1/18 0800</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/1/18 11:50</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/1/18 16:40</u>	Received by: <u>Imber O'Connell FedEx</u>	Date/Time: <u>2/2/18 1050</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:

*[Handwritten initials]*

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-145720-2  
Client Project/Site: IDOT - AE7-01

For:  
Andrews Engineering Inc.  
3300 Ginger Creek Drive  
Springfield, Illinois 62711

Attn: Ms. Colleen Grey



Authorized for release by:  
6/5/2018 8:13:06 AM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-2

**Client Sample ID: 2291V-5-B04**

**Lab Sample ID: 500-145720-5**

**Date Collected: 05/18/18 12:30**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 85.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2-Methylnaphthalene	<0.077		0.077	0.0070	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Anthracene	<0.038		0.038	0.0064	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Benzo[a]anthracene</b>	<b>0.016</b>	<b>J</b>	0.038	0.0051	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Benzo[a]pyrene</b>	<b>0.018</b>	<b>J</b>	0.038	0.0074	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Benzo[b]fluoranthene</b>	<b>0.020</b>	<b>J</b>	0.038	0.0082	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Benzo[g,h,i]perylene	<0.038		0.038	0.012	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Benzo[k]fluoranthene	<0.038		0.038	0.011	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Carbazole</b>	<b>0.12</b>	<b>J</b>	0.19	0.095	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Chrysene</b>	<b>0.020</b>	<b>J</b>	0.038	0.010	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Fluoranthene</b>	<b>0.025</b>	<b>J</b>	0.038	0.0071	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1

TestAmerica Chicago

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-2

**Client Sample ID: 2291V-5-B04**

**Lab Sample ID: 500-145720-5**

**Date Collected: 05/18/18 12:30**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 85.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Hexachlorobenzene	<0.077		0.077	0.0089	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Indeno[1,2,3-cd]pyrene	<0.038		0.038	0.0099	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Phenanthrene</b>	<b>0.013</b>	<b>J</b>	0.038	0.0053	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
Phenol	<0.19		0.19	0.085	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1
<b>Pyrene</b>	<b>0.030</b>	<b>J</b>	0.038	0.0076	mg/Kg	☼	05/29/18 07:40	06/01/18 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	57		25 - 139	05/29/18 07:40	06/01/18 16:56	1
2-Fluorobiphenyl	87		44 - 121	05/29/18 07:40	06/01/18 16:56	1
2-Fluorophenol	113		46 - 133	05/29/18 07:40	06/01/18 16:56	1
Nitrobenzene-d5	84		41 - 120	05/29/18 07:40	06/01/18 16:56	1
Phenol-d5	80		46 - 125	05/29/18 07:40	06/01/18 16:56	1
Terphenyl-d14	116		35 - 160	05/29/18 07:40	06/01/18 16:56	1

# Definitions/Glossary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-2

## Qualifiers

### GC/MS Semi VOA

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

## Glossary

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

# Accreditation/Certification Summary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-2

## Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids





# CHAIN OF CUSTODY RECORD

<b>Client Contact</b> Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com					<b>Laboratory</b> Lab: <b>Test America - Chicago</b> Address: <b>2417 Bond Street</b> <b>University Park, IL 60484</b> Phone: <b>708-534-5200</b> Contact: <b>Dick Wright</b> email: richard.wright@testamericainc.com					Project Name: <u>IL173, McHENRY CO</u> Project No.: <u>PTB 184-006/AE7-01A</u> TAT: <input type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: <u>Sarid Khodaei</u>					COC No.: <u>1</u> of <u>1</u> Lab Job No.: <u>500-145720</u> Sample Temp.: <u>4.6</u>		
<b>Special Instructions:</b> See Table 2 for complete parameter lists and minimum reporting limits. * If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal. ** If SPLP result exceeds Class I Standard, run TCLP for that specific parameter. *** If total cyanide exceeds Class I Standard, run ASTM D3987 (Neutral Leach) cyanide.					<b>ANALYSES</b>										<b>Matrix Key:</b> W: Water S: Soil SL: Sludge S: Sediment L: Leachate DW: Drinking Water OL: Oil O: Other		
Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	*** Cyanide	pH	% Solids	Waste Characterization	Comments
4	2291V-5-1301	5-18-18	1220	S		X											
5	2291V-5-1304	5-18-18	1230	S		X											
Relinquished by: <u>Sarid Khodaei</u>					Date/Time: <u>5/18/18 - 1300</u>					Received by: <u>[Signature]</u>					Date/Time: <u>5-18-18 1600</u>		
Relinquished by: <u>[Signature]</u>					Date/Time: <u>5-18-18 1820</u>					Received by: <u>[Signature]</u> <u>TACHE</u>					Date/Time: <u>05/18/18 1820</u>		
Relinquished by: <u>[Signature]</u>					Date/Time: <u> </u>					Received by: <u> </u>					Date/Time: <u> </u>		



# Illinois Environmental Protection Agency

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

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

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

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

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

### I. Source Location Information

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

Project Name: FAP 303 (IL 173) Office Phone Number, if available: \_\_\_\_\_

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

28000 block of West IL 173 (Northeast Quadrant of Wilmot Road and IL 173)

City: Spring Grove State: IL Zip Code: 60081

County: McHenry Township: Burton and Antioch

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

Latitude: 42.48098 Longitude: -88.20381

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: 1114200001 BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

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

Project Name: FAP 303 (IL 173)

Latitude: 42.48098 Longitude: -88.20381

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and approximately located 35 Ill. Adm. Code 1100.610(a):

LOCATIONS 2291V-6-B01 THROUGH -B03, 2291V-6-B07 THROUGH -B10, AND 2291V-6-B12 WERE SAMPLED ADJACENT TO SITE 2291V-6. SEE TABLE 3d AND FIGURES 4,5,7 AND 8 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

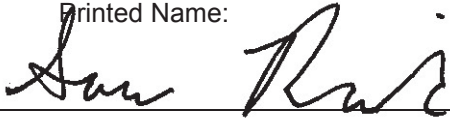
TEKLAB INC. ANALYTICAL REPORT - WORK ORDER: 18020120  
 TESTAMERICA ANALYTICAL REPORT - JOB ID NUMBER: 500-145720-3

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

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

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

Company Name: Andrews Engineering, Inc.  
 Street Address: 420 Eisenhower Lane North  
 City: Lombard State: IL Zip Code: 60148  
 Phone: 630-953-3332

Savo Radulovic  
 Printed Name:  
  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

June 15, 2018  
 Date:



The following table summarizes the results of laboratory analysis of site soil samples. In reading the table,

- Only parameters reported at concentrations above the most stringent MAC are listed.
- Samples with the notation “**No Contaminants of Concern Noted**” were below the most stringent MAC.

The laboratory report for site soils follows this summary table.

**THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES**

**ANALYTICAL PARAMETERS**

<b>Volatile Organic Compounds (mg/kg)</b>
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichloropropene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether (MTBE)
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl acetate
Vinyl chloride
Xylenes, total
<b>Semivolatile Organic Compounds (mg/kg)</b>
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Methylphenol
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo(a,h)anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene

**THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES**

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
<b>Inorganic Compounds, Total (mg/kg)</b>
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc
Cyanide
<b>TCLP/SPLP Inorganics (mg/L)</b>
Antimony
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Iron
Lead
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide

**ISGS Site 2291V-6  
Thelen Excavating**

Sample ID	2291V-6-B01	2291V-6-B02	2291V-6-B03	2291V-6-B07	2291V-6-B07 DUP	Maximum Allowable Concentration						
Sample Depth (ft)	0-4	0-5	0-6	0-3	0-3	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area		
Sample Date	2/1/2018	2/1/2018	2/1/2018	2/1/2018	2/1/2018							
PID	0	0	0	0	0							
Sample pH	7.6	8.79	7.73	8.64	8.05							
Matrix	Soil	Soil	Soil	Soil	Soil							
<b>SPLP Metals (mg/L)</b>												
Manganese	1.29	0.0385	1.01	2.55	6	0.581	6	m	--	--	--	--
<b>TCLP Metals (mg/L)</b>												
Manganese	0.0277	NT	0.029	1.22	6	0.556	6	m	--	--	--	--

**ISGS Site 2291V-6  
Thelen Excavating**

Sample ID	2291V-6-B08	2291V-6-B09	2291V-6-B10	2291V-6-B12	Maximum Allowable Concentration					
Sample Depth (ft)	0-3	0-3	0-3	0-3	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area	
Sample Date	2/1/2018	2/1/2018	2/1/2018	2/1/2018						
PID	0	0	0	0						
Sample pH	8.08	8.14	7.71	8.17						
Matrix	Soil	Soil	Soil	Soil						
<b>SPLP Metals (mg/L)</b>										
Manganese	4.21	2.52	1.39	3.97	m	--	--	--	--	
<b>TCLP Metals (mg/L)</b>										
Manganese	0.0106	0.033	0.0167	0.0437	m	--	--	--	--	



February 19, 2018

Colleen Grey  
Andrews Engineering, Inc.  
3300 Ginger Creek Drive  
Springfield, IL 62711-7233  
TEL: (217) 787-2334  
FAX: (217) 787-9495



**RE:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**WorkOrder:** 18020120

Dear Colleen Grey:

TEKLAB, INC received 15 samples on 2/2/2018 10:15:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020120

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 19-Feb-18

### Abbr Definition

\* Analytes on report marked with an asterisk are not NELAP accredited

CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.

DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.

DNI Did not ignite

DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.

ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.

IDPH IL Dept. of Public Health

LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).

LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.

MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).

MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).

MW Molecular weight

ND Not Detected at the Reporting Limit

NELAP NELAP Accredited

PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).

RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.

RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).

SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.

Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.

TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"

TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

# - Unknown hydrocarbon

E - Value above quantitation range

I - Associated internal standard was outside method criteria

M - Manual Integration used to determine area response

R - RPD outside accepted recovery limits

T - TIC(Tentatively identified compound)

B - Analyte detected in associated Method Blank

H - Holding times exceeded

J - Analyte detected below quantitation limits

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside recovery limits

X - Value exceeds Maximum Contaminant Level



## Accreditations

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020120

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 19-Feb-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-001

Client Sample ID: 2291V-6-B01

Matrix: SOLID

Collection Date: 02/01/2018 8:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.2</b>	%	1	02/06/2018 15:20	R243216
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.8</b>	%	1	02/06/2018 15:20	R243216
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.28		<b>0.28</b>	mg/Kg-dry	1	02/08/2018 15:17	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>7.60</b>		1	02/05/2018 21:32	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.691</b>	mg/L	1	02/13/2018 14:04	138915
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/13/2018 14:04	138915
Manganese	NELAP	0.0016	0.0050		<b>0.0277</b>	mg/L	1	02/13/2018 14:04	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	<b>0.0174</b>	mg/L	1	02/08/2018 22:42	138773
Barium	NELAP	0.0024	0.0050		<b>0.526</b>	mg/L	1	02/08/2018 22:42	138773
Beryllium	NELAP	0.0003	0.0010		<b>0.0023</b>	mg/L	1	02/08/2018 22:42	138773
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/08/2018 22:42	138773
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/08/2018 22:42	138773
Chromium	NELAP	0.0040	0.0100		<b>0.0551</b>	mg/L	1	02/08/2018 22:42	138773
Cobalt	NELAP	0.0022	0.0100		<b>0.0118</b>	mg/L	1	02/08/2018 22:42	138773
Iron	NELAP	0.0450	0.0500	SX	<b>51.4</b>	mg/L	1	02/08/2018 22:42	138773
Lead	NELAP	0.0060	0.0070	X	<b>0.0540</b>	mg/L	1	02/08/2018 22:42	138773
Manganese	NELAP	0.0016	0.0050	X	<b>1.29</b>	mg/L	1	02/08/2018 22:42	138773
Nickel	NELAP	0.0033	0.0100		<b>0.0403</b>	mg/L	1	02/08/2018 22:42	138773
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/08/2018 22:42	138773
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/08/2018 22:42	138773
Zinc	NELAP	0.0021	0.0100		<b>0.212</b>	mg/L	1	02/08/2018 22:42	138773
<i>Matrix spike control limits for Fe are not applicable due to high sample/spike ratio.</i>									
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	JS	<b>0.0006</b>	mg/L	5	02/14/2018 15:56	138922
Thallium	NELAP	0.0005	0.0010	J	<b>0.0008</b>	mg/L	5	02/09/2018 15:28	138774
<i>Sb-Matrix spike did not recover within control limits due to matrix interference. Verified by re-prep and re-analysis.</i>									
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100		<b>&lt; 0.00100</b>	mg/L	1	02/08/2018 12:29	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		<b>&lt; 4.63</b>	mg/Kg-dry	1	02/08/2018 0:53	138744
Arsenic	NELAP	0.94	2.36		<b>7.26</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Barium	NELAP	0.09	0.24		<b>183</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Beryllium	NELAP	0.03	0.05		<b>1.08</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Boron	NELAP	0.47	1.89		<b>6.96</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Cadmium	NELAP	0.05	0.19		<b>0.54</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Chromium	NELAP	0.19	0.47	X	<b>20.5</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Cobalt	NELAP	0.19	0.47		<b>11.2</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Copper	NELAP	0.14	0.47		<b>15.4</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Iron	NELAP	0.94	1.89	X	<b>20800</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Lead	NELAP	0.47	1.42		<b>39.2</b>	mg/Kg-dry	1	02/07/2018 13:14	138732
Magnesium	NELAP	0.38	4.72		<b>3390</b>	mg/Kg-dry	1	02/07/2018 13:14	138732

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-001

Client Sample ID: 2291V-6-B01

Matrix: SOLID

Collection Date: 02/01/2018 8:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Manganese	NELAP	0.07	0.28	X	1310	mg/Kg-dry	1	02/07/2018 13:14	138732
Nickel	NELAP	0.19	0.47		18.7	mg/Kg-dry	1	02/07/2018 13:14	138732
Silver	NELAP	0.50	0.52		< 0.52	mg/Kg-dry	1	02/07/2018 13:14	138732
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/07/2018 13:14	138732
Vanadium	NELAP	0.19	0.94		37.0	mg/Kg-dry	1	02/07/2018 13:14	138732
Zinc	NELAP	0.38	0.94		104	mg/Kg-dry	1	02/07/2018 13:14	138732
<i>Elevated reporting limit for Ag due to high levels of target and non-target analytes.</i>									
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94	J	0.45	mg/Kg-dry	10	02/07/2018 19:33	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.033	mg/Kg-dry	1	02/06/2018 9:16	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.164	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
1,2-Dichlorobenzene	NELAP	0.196	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
1,3-Dichlorobenzene	NELAP	0.208	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
1,4-Dichlorobenzene	NELAP	0.196	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,4,5-Trichlorophenol	NELAP	0.136	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,4,6-Trichlorophenol	NELAP	0.156	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,4-Dichlorophenol	NELAP	0.150	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,4-Dimethylphenol	NELAP	0.157	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,4-Dinitrophenol	NELAP	0.132	1.24		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,4-Dinitrotoluene	NELAP	0.129	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2,6-Dinitrotoluene	NELAP	0.133	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2-Chloronaphthalene	NELAP	0.148	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2-Chlorophenol	NELAP	0.157	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2-Methylnaphthalene	NELAP	0.147	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2-Nitroaniline	NELAP	0.198	1.24		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
2-Nitrophenol	NELAP	0.138	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
3,3'-Dichlorobenzidine	NELAP	0.247	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
3-Nitroaniline	NELAP	0.185	1.24		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4,6-Dinitro-2-methylphenol	NELAP	0.133	1.24		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4-Bromophenyl phenyl ether	NELAP	0.114	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4-Chloro-3-methylphenol	NELAP	0.136	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4-Chloroaniline	NELAP	0.185	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4-Chlorophenyl phenyl ether	NELAP	0.122	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4-Nitroaniline	NELAP	0.185	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
4-Nitrophenol	NELAP	0.148	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Bis(2-chloroethoxy)methane	NELAP	0.145	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Bis(2-chloroethyl)ether	NELAP	0.175	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-001

Client Sample ID: 2291V-6-B01

Matrix: SOLID

Collection Date: 02/01/2018 8:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-chloroisopropyl)ether	NELAP	0.141	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.145	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Butyl benzyl phthalate	NELAP	0.125	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Carbazole	NELAP	0.151	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Dibenzofuran	NELAP	0.185	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Diethyl phthalate	NELAP	0.119	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Dimethyl phthalate	NELAP	0.112	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Di-n-butyl phthalate	NELAP	0.127	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Di-n-octyl phthalate	NELAP	0.129	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Hexachlorobenzene	NELAP	0.206	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Hexachlorobutadiene	NELAP	0.192	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Hexachlorocyclopentadiene	NELAP	0.126	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Hexachloroethane	NELAP	0.206	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Isophorone	NELAP	0.146	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
m,p-Cresol	NELAP	0.156	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Nitrobenzene	NELAP	0.154	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
N-Nitroso-di-n-propylamine	NELAP	0.136	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
N-Nitrosodiphenylamine	NELAP	0.114	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
o-Cresol	NELAP	0.146	0.618		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Pentachlorophenol	NELAP	0.816	2.47		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Phenol	NELAP	0.143	0.433		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 22:59	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		61.3	%REC	1	02/09/2018 22:59	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		50.6	%REC	1	02/09/2018 22:59	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		41.5	%REC	1	02/09/2018 22:59	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		42.6	%REC	1	02/09/2018 22:59	138832
Surr: Phenol-d5	*	0	38.8-103		44.4	%REC	1	02/09/2018 22:59	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		59.4	%REC	1	02/09/2018 22:59	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,1,2-Trichloroethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,1-Dichloroethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,1-Dichloroethene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,2-Dichloroethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,2-Dichloropropane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
1,3-Dichloropropene, Total	*	0.00097	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
2-Butanone	NELAP	0.122	0.195		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
2-Hexanone	NELAP	0.00974	0.0487		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
4-Methyl-2-pentanone	NELAP	0.00974	0.0487		ND	mg/Kg-dry	1	02/06/2018 19:00	138747



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-001

Client Sample ID: 2291V-6-B01

Matrix: SOLID

Collection Date: 02/01/2018 8:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Acetone	NELAP	0.0161	0.0487		<b>0.155</b>	mg/Kg-dry	1	02/06/2018 19:00	138747
Benzene	NELAP	0.00049	0.0010	J	<b>0.0005</b>	mg/Kg-dry	1	02/06/2018 19:00	138747
Bromodichloromethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Bromoform	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Bromomethane	NELAP	0.00244	0.0097		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Carbon disulfide	NELAP	0.00292	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Carbon tetrachloride	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Chlorobenzene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Chloroethane	NELAP	0.00195	0.0097		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Chloroform	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Chloromethane	NELAP	0.00195	0.0097		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
cis-1,2-Dichloroethene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
cis-1,3-Dichloropropene	NELAP	0.00097	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Dibromochloromethane	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Ethylbenzene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
m,p-Xylenes	NELAP	0.00195	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Methyl tert-butyl ether	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Methylene chloride	NELAP	0.00130	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
o-Xylene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Styrene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Tetrachloroethene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Toluene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
trans-1,2-Dichloroethene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
trans-1,3-Dichloropropene	NELAP	0.00097	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Trichloroethene	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Vinyl acetate	NELAP	0.0195	0.0487		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Vinyl chloride	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Xylenes, Total	NELAP	0.00097	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:00	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>106.2</b>	%REC	1	02/06/2018 19:00	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>106.9</b>	%REC	1	02/06/2018 19:00	138747
Surr: Dibromofluoromethane	*	0	77.7-120		<b>101.8</b>	%REC	1	02/06/2018 19:00	138747
Surr: Toluene-d8	*	0	86-116		<b>102.2</b>	%REC	1	02/06/2018 19:00	138747



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-002

Client Sample ID: 2291V-6-B02

Matrix: SOLID

Collection Date: 02/01/2018 9:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		4.8	%	1	02/06/2018 15:21	R243216
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		95.2	%	1	02/06/2018 15:21	R243216
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.09	0.23		< 0.23	mg/Kg-dry	1	02/08/2018 15:21	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.79		1	02/05/2018 21:39	R243146
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/08/2018 22:50	138773
Barium	NELAP	0.0024	0.0050		0.0236	mg/L	1	02/08/2018 22:50	138773
Beryllium	NELAP	0.0003	0.0010		< 0.0010	mg/L	1	02/08/2018 22:50	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 22:50	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 22:50	138773
Chromium	NELAP	0.0040	0.0100		< 0.0100	mg/L	1	02/08/2018 22:50	138773
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/08/2018 22:50	138773
Iron	NELAP	0.0450	0.0500		3.19	mg/L	1	02/08/2018 22:50	138773
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/08/2018 22:50	138773
Manganese	NELAP	0.0016	0.0050		0.0385	mg/L	1	02/08/2018 22:50	138773
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/08/2018 22:50	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 22:50	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 22:50	138773
Zinc	NELAP	0.0021	0.0100		0.0113	mg/L	1	02/08/2018 22:50	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	02/08/2018 16:44	138774
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/09/2018 15:36	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100		< 0.00100	mg/L	1	02/08/2018 12:33	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.47	4.90		< 4.90	mg/Kg-dry	1	02/08/2018 0:59	138744
Arsenic	NELAP	0.93	2.31		5.07	mg/Kg-dry	1	02/07/2018 13:20	138732
Barium	NELAP	0.09	0.23		23.3	mg/Kg-dry	1	02/07/2018 13:20	138732
Beryllium	NELAP	0.03	0.05		0.87	mg/Kg-dry	1	02/07/2018 13:20	138732
Boron	NELAP	0.46	1.85		9.91	mg/Kg-dry	1	02/07/2018 13:20	138732
Cadmium	NELAP	0.05	0.19		0.22	mg/Kg-dry	1	02/07/2018 13:20	138732
Chromium	NELAP	0.19	0.46		7.73	mg/Kg-dry	1	02/07/2018 13:20	138732
Cobalt	NELAP	0.19	0.46		4.52	mg/Kg-dry	1	02/07/2018 13:20	138732
Copper	NELAP	0.14	0.46		15.7	mg/Kg-dry	1	02/07/2018 13:20	138732
Iron	NELAP	0.93	1.85		14500	mg/Kg-dry	1	02/07/2018 13:20	138732
Lead	NELAP	0.46	1.39		5.81	mg/Kg-dry	1	02/07/2018 13:20	138732
Magnesium	NELAP	0.37	4.63		72900	mg/Kg-dry	1	02/07/2018 13:20	138732
Manganese	NELAP	0.06	0.28		369	mg/Kg-dry	1	02/07/2018 13:20	138732
Nickel	NELAP	0.19	0.46		11.7	mg/Kg-dry	1	02/07/2018 13:20	138732
Silver	NELAP	0.14	0.46		< 0.46	mg/Kg-dry	1	02/07/2018 13:20	138732
Thallium	NELAP	1.39	2.41		< 2.41	mg/Kg-dry	1	02/07/2018 13:20	138732
Vanadium	NELAP	0.19	0.93		21.8	mg/Kg-dry	1	02/07/2018 13:20	138732
Zinc	NELAP	0.37	0.93		32.0	mg/Kg-dry	1	02/07/2018 13:20	138732



Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-002

Client Sample ID: 2291V-6-B02

Matrix: SOLID

Collection Date: 02/01/2018 9:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.37	0.93		< 0.93	mg/Kg-dry	10	02/07/2018 19:42	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.010	J	0.010	mg/Kg-dry	1	02/06/2018 9:18	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.395	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
1,2-Dichlorobenzene	NELAP	0.472	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
1,3-Dichlorobenzene	NELAP	0.498	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
1,4-Dichlorobenzene	NELAP	0.472	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,4,5-Trichlorophenol	NELAP	0.326	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,4,6-Trichlorophenol	NELAP	0.374	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,4-Dichlorophenol	NELAP	0.359	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,4-Dimethylphenol	NELAP	0.377	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,4-Dinitrophenol	NELAP	0.317	2.97		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,4-Dinitrotoluene	NELAP	0.309	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2,6-Dinitrotoluene	NELAP	0.320	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2-Chloronaphthalene	NELAP	0.356	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2-Chlorophenol	NELAP	0.377	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2-Methylnaphthalene	NELAP	0.353	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2-Nitroaniline	NELAP	0.475	2.97		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
2-Nitrophenol	NELAP	0.332	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
3,3'-Dichlorobenzidine	NELAP	0.593	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
3-Nitroaniline	NELAP	0.445	2.97		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4,6-Dinitro-2-methylphenol	NELAP	0.320	2.97		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4-Bromophenyl phenyl ether	NELAP	0.273	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4-Chloro-3-methylphenol	NELAP	0.326	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4-Chloroaniline	NELAP	0.445	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4-Chlorophenyl phenyl ether	NELAP	0.294	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4-Nitroaniline	NELAP	0.445	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
4-Nitrophenol	NELAP	0.356	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Acenaphthene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Acenaphthylene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Anthracene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Benzo(a)anthracene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Benzo(a)pyrene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Benzo(b)fluoranthene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Benzo(g,h,i)perylene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Benzo(k)fluoranthene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Bis(2-chloroethoxy)methane	NELAP	0.347	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Bis(2-chloroethyl)ether	NELAP	0.421	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Bis(2-chloroisopropyl)ether	NELAP	0.338	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Bis(2-ethylhexyl)phthalate	NELAP	0.347	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Butyl benzyl phthalate	NELAP	0.300	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Carbazole	NELAP	0.362	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Chrysene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Dibenzo(a,h)anthracene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Dibenzofuran	NELAP	0.445	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Diethyl phthalate	NELAP	0.285	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-002

Client Sample ID: 2291V-6-B02

Matrix: SOLID

Collection Date: 02/01/2018 9:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dimethyl phthalate	NELAP	0.270	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Di-n-butyl phthalate	NELAP	0.306	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Di-n-octyl phthalate	NELAP	0.309	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Fluoranthene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Fluorene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Hexachlorobenzene	NELAP	0.495	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Hexachlorobutadiene	NELAP	0.460	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Hexachlorocyclopentadiene	NELAP	0.303	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Hexachloroethane	NELAP	0.495	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Isophorone	NELAP	0.350	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
m,p-Cresol	NELAP	0.374	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Naphthalene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Nitrobenzene	NELAP	0.371	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
N-Nitroso-di-n-propylamine	NELAP	0.326	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
N-Nitrosodiphenylamine	NELAP	0.273	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
o-Cresol	NELAP	0.350	1.48		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Pentachlorophenol	NELAP	1.96	5.93		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Phenanthrene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Phenol	NELAP	0.344	1.04		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Pyrene	NELAP	0.050	0.101		ND	mg/Kg-dry	1	02/09/2018 14:29	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		67.8	%REC	1	02/09/2018 14:29	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		43.8	%REC	1	02/09/2018 14:29	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		43.6	%REC	1	02/09/2018 14:29	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		46.8	%REC	1	02/09/2018 14:29	138832
Surr: Phenol-d5	*	0	38.8-103		47.1	%REC	1	02/09/2018 14:29	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		72.5	%REC	1	02/09/2018 14:29	138832

*Elevated reporting limit due to sample composition.*

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,1,2,2-Tetrachloroethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,1,2-Trichloroethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,1-Dichloroethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,1-Dichloroethene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,2-Dichloroethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,2-Dichloropropane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
1,3-Dichloropropene, Total	*	0.0207	0.0828		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
2-Butanone	NELAP	2.59	4.14		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
2-Hexanone	NELAP	0.207	1.04		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
4-Methyl-2-pentanone	NELAP	0.207	1.04		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Acetone	NELAP	0.342	1.04		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Benzene	NELAP	0.0104	0.0207		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Bromodichloromethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Bromoform	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Bromomethane	NELAP	0.0518	0.207		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Carbon disulfide	NELAP	0.0621	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Carbon tetrachloride	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-002

Client Sample ID: 2291V-6-B02

Matrix: SOLID

Collection Date: 02/01/2018 9:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chlorobenzene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Chloroethane	NELAP	0.0414	0.207		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Chloroform	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Chloromethane	NELAP	0.0414	0.207		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
cis-1,2-Dichloroethene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
cis-1,3-Dichloropropene	NELAP	0.0207	0.0828		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Dibromochloromethane	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Ethylbenzene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
m,p-Xylenes	NELAP	0.0414	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Methyl tert-butyl ether	NELAP	0.0104	0.0414	J	0.0186	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Methylene chloride	NELAP	0.0275	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
o-Xylene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Styrene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Tetrachloroethene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Toluene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
trans-1,2-Dichloroethene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
trans-1,3-Dichloropropene	NELAP	0.0207	0.0828		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Trichloroethene	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Vinyl acetate	NELAP	0.414	1.04		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Vinyl chloride	NELAP	0.0104	0.0414		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Xylenes, Total	NELAP	0.0207	0.104		ND	mg/Kg-dry	12.5	02/08/2018 12:02	138831
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		92.4	%REC	12.5	02/08/2018 12:02	138831
Surr: 4-Bromofluorobenzene	*	0	82.1-116		96.3	%REC	12.5	02/08/2018 12:02	138831
Surr: Dibromofluoromethane	*	0	77.7-120		94.8	%REC	12.5	02/08/2018 12:02	138831
Surr: Toluene-d8	*	0	86-116		101.9	%REC	12.5	02/08/2018 12:02	138831

*Elevated reporting limit due to matrix interference.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-003

Client Sample ID: 2291V-6-B03

Matrix: SOLID

Collection Date: 02/01/2018 9:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.2	%	1	02/07/2018 13:52	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.8	%	1	02/07/2018 13:52	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.13	0.32	J	0.16	mg/Kg-dry	1	02/08/2018 15:26	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.73		1	02/06/2018 18:26	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.136	mg/L	1	02/13/2018 14:11	138915
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 14:11	138915
Manganese	NELAP	0.0016	0.0050		0.0290	mg/L	1	02/13/2018 14:11	138915
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		0.0260	mg/L	1	02/08/2018 23:01	138773
Barium	NELAP	0.0024	0.0050		0.432	mg/L	1	02/08/2018 23:01	138773
Beryllium	NELAP	0.0003	0.0010		0.0027	mg/L	1	02/08/2018 23:01	138773
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 23:01	138773
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 23:01	138773
Chromium	NELAP	0.0040	0.0100		0.0724	mg/L	1	02/08/2018 23:01	138773
Cobalt	NELAP	0.0022	0.0100		0.0142	mg/L	1	02/08/2018 23:01	138773
Iron	NELAP	0.0450	0.0500	X	76.1	mg/L	1	02/08/2018 23:01	138773
Lead	NELAP	0.0060	0.0070	X	0.0334	mg/L	1	02/08/2018 23:01	138773
Manganese	NELAP	0.0016	0.0050	X	1.01	mg/L	1	02/08/2018 23:01	138773
Nickel	NELAP	0.0033	0.0100		0.0564	mg/L	1	02/08/2018 23:01	138773
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 23:01	138773
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 23:01	138773
Zinc	NELAP	0.0021	0.0100		0.139	mg/L	1	02/08/2018 23:01	138773
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	02/09/2018 15:45	138774
Thallium	NELAP	0.0005	0.0010	J	0.0008	mg/L	5	02/09/2018 15:45	138774
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00008	mg/L	1	02/08/2018 12:45	138781
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.36	4.55		< 4.55	mg/Kg-dry	1	02/08/2018 1:22	138744
Arsenic	NELAP	0.91	2.27		10.1	mg/Kg-dry	1	02/07/2018 15:10	138732
Barium	NELAP	0.09	0.23		135	mg/Kg-dry	1	02/07/2018 15:10	138732
Beryllium	NELAP	0.03	0.05		1.15	mg/Kg-dry	1	02/07/2018 15:10	138732
Boron	NELAP	0.45	1.82		7.85	mg/Kg-dry	1	02/07/2018 15:10	138732
Cadmium	NELAP	0.05	0.18		0.30	mg/Kg-dry	1	02/07/2018 15:10	138732
Chromium	NELAP	0.18	0.45	X	26.4	mg/Kg-dry	1	02/07/2018 15:10	138732
Cobalt	NELAP	0.18	0.45		10.6	mg/Kg-dry	1	02/07/2018 15:10	138732
Copper	NELAP	0.14	0.45		21.3	mg/Kg-dry	1	02/07/2018 15:10	138732
Iron	NELAP	0.91	1.82	X	28400	mg/Kg-dry	1	02/07/2018 15:10	138732
Lead	NELAP	0.45	1.36		14.5	mg/Kg-dry	1	02/07/2018 15:10	138732
Magnesium	NELAP	0.36	4.55		4820	mg/Kg-dry	1	02/07/2018 15:10	138732
Manganese	NELAP	0.06	0.27	X	722	mg/Kg-dry	1	02/07/2018 15:10	138732

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-003

Client Sample ID: 2291V-6-B03

Matrix: SOLID

Collection Date: 02/01/2018 9:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Nickel	NELAP	0.18	0.45		23.1	mg/Kg-dry	1	02/07/2018 15:10	138732
Silver	NELAP	0.63	0.64		< 0.64	mg/Kg-dry	1	02/07/2018 15:10	138732
Thallium	NELAP	1.36	2.36		< 2.36	mg/Kg-dry	1	02/07/2018 15:10	138732
Vanadium	NELAP	0.18	0.91		47.6	mg/Kg-dry	1	02/07/2018 15:10	138732
Zinc	NELAP	0.36	0.91		54.7	mg/Kg-dry	1	02/07/2018 15:10	138732
<i>Elevated reporting limit for Ag due to high levels of target and non-target analytes.</i>									
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.36	0.91	J	0.40	mg/Kg-dry	10	02/07/2018 19:50	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.004	0.013		0.046	mg/Kg-dry	1	02/06/2018 9:20	138687
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.167	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
1,2-Dichlorobenzene	NELAP	0.199	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
1,3-Dichlorobenzene	NELAP	0.211	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
1,4-Dichlorobenzene	NELAP	0.199	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,4,5-Trichlorophenol	NELAP	0.138	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,4,6-Trichlorophenol	NELAP	0.158	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,4-Dichlorophenol	NELAP	0.152	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,4-Dimethylphenol	NELAP	0.159	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,4-Dinitrotoluene	NELAP	0.130	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2,6-Dinitrotoluene	NELAP	0.135	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2-Chloronaphthalene	NELAP	0.151	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2-Chlorophenol	NELAP	0.159	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2-Methylnaphthalene	NELAP	0.149	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2-Nitroaniline	NELAP	0.201	1.25		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
2-Nitrophenol	NELAP	0.140	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
3,3'-Dichlorobenzidine	NELAP	0.251	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
3-Nitroaniline	NELAP	0.188	1.25		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4-Bromophenyl phenyl ether	NELAP	0.115	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4-Chloro-3-methylphenol	NELAP	0.138	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4-Chloroaniline	NELAP	0.188	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4-Chlorophenyl phenyl ether	NELAP	0.124	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4-Nitroaniline	NELAP	0.188	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
4-Nitrophenol	NELAP	0.151	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Bis(2-chloroethoxy)methane	NELAP	0.147	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Bis(2-chloroethyl)ether	NELAP	0.178	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Bis(2-chloroisopropyl)ether	NELAP	0.143	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-003

Client Sample ID: 2291V-6-B03

Matrix: SOLID

Collection Date: 02/01/2018 9:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-ethylhexyl)phthalate	NELAP	0.147	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Butyl benzyl phthalate	NELAP	0.127	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Carbazole	NELAP	0.153	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Dibenzofuran	NELAP	0.188	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Diethyl phthalate	NELAP	0.120	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Dimethyl phthalate	NELAP	0.114	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Di-n-butyl phthalate	NELAP	0.129	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Di-n-octyl phthalate	NELAP	0.130	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Hexachlorobenzene	NELAP	0.209	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Hexachlorobutadiene	NELAP	0.194	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Hexachlorocyclopentadiene	NELAP	0.128	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Hexachloroethane	NELAP	0.209	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Isophorone	NELAP	0.148	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
m,p-Cresol	NELAP	0.158	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Nitrobenzene	NELAP	0.157	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
N-Nitroso-di-n-propylamine	NELAP	0.138	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
N-Nitrosodiphenylamine	NELAP	0.115	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
o-Cresol	NELAP	0.148	0.627		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Pentachlorophenol	NELAP	0.828	2.51		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Phenol	NELAP	0.145	0.439		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 15:02	138832
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		72.0	%REC	1	02/09/2018 15:02	138832
Surr: 2-Fluorobiphenyl	*	0	29.3-105		39.6	%REC	1	02/09/2018 15:02	138832
Surr: 2-Fluorophenol	*	0	35.8-97.2		53.9	%REC	1	02/09/2018 15:02	138832
Surr: Nitrobenzene-d5	*	0	36.2-95.2		52.7	%REC	1	02/09/2018 15:02	138832
Surr: Phenol-d5	*	0	38.8-103		57.5	%REC	1	02/09/2018 15:02	138832
Surr: p-Terphenyl-d14	*	0	43.2-116		74.8	%REC	1	02/09/2018 15:02	138832
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,1,2,2-Tetrachloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,1,2-Trichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,1-Dichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,1-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,2-Dichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,2-Dichloropropane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
1,3-Dichloropropene, Total	*	0.00098	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
2-Butanone	NELAP	0.123	0.196		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
2-Hexanone	NELAP	0.00982	0.0491		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
4-Methyl-2-pentanone	NELAP	0.00982	0.0491		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Acetone	NELAP	0.0162	0.0491		0.0676	mg/Kg-dry	1	02/06/2018 19:52	138747



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-003

Client Sample ID: 2291V-6-B03

Matrix: SOLID

Collection Date: 02/01/2018 9:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzene	NELAP	0.00049	0.0010		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Bromodichloromethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Bromoform	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Bromomethane	NELAP	0.00246	0.0098		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Carbon disulfide	NELAP	0.00295	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Carbon tetrachloride	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Chlorobenzene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Chloroethane	NELAP	0.00196	0.0098		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Chloroform	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Chloromethane	NELAP	0.00196	0.0098		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
cis-1,2-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
cis-1,3-Dichloropropene	NELAP	0.00098	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Dibromochloromethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Ethylbenzene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
m,p-Xylenes	NELAP	0.00196	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Methyl tert-butyl ether	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Methylene chloride	NELAP	0.00131	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
o-Xylene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Styrene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Tetrachloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Toluene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
trans-1,2-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
trans-1,3-Dichloropropene	NELAP	0.00098	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Trichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Vinyl acetate	NELAP	0.0196	0.0491		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Vinyl chloride	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Xylenes, Total	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138747
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>104.4</b>	%REC	1	02/06/2018 19:52	138747
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>96.4</b>	%REC	1	02/06/2018 19:52	138747
Surr: Dibromofluoromethane	*	0	77.7-120		<b>100.5</b>	%REC	1	02/06/2018 19:52	138747
Surr: Toluene-d8	*	0	86-116		<b>97.7</b>	%REC	1	02/06/2018 19:52	138747

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-008

Client Sample ID: 2291V-6-B07

Matrix: SOLID

Collection Date: 02/01/2018 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		7.4	%	1	02/06/2018 15:21	R243216
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		92.6	%	1	02/06/2018 15:21	R243216
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.10	0.26	J	0.11	mg/Kg-dry	1	02/08/2018 16:13	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.64		1	02/05/2018 21:49	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 11:21	138917
Beryllium	NELAP	0.0003	0.0010		< 0.0010	mg/L	1	02/13/2018 11:21	138917
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 11:21	138917
Iron	NELAP	0.0070	0.0200		0.0738	mg/L	1	02/13/2018 11:21	138917
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 11:21	138917
Manganese	NELAP	0.0016	0.0050		1.22	mg/L	1	02/13/2018 11:21	138917
Nickel	NELAP	0.0033	0.0100		0.0146	mg/L	1	02/13/2018 11:21	138917
<b>SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS</b>									
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/14/2018 19:05	138918
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0762	mg/L	1	02/08/2018 23:37	138775
Barium	NELAP	0.0024	0.0050		0.858	mg/L	1	02/08/2018 23:37	138775
Beryllium	NELAP	0.0003	0.0010	X	0.0078	mg/L	1	02/08/2018 23:37	138775
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 23:37	138775
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 23:37	138775
Chromium	NELAP	0.0040	0.0100	X	0.204	mg/L	1	02/08/2018 23:37	138775
Cobalt	NELAP	0.0022	0.0100		0.0395	mg/L	1	02/08/2018 23:37	138775
Iron	NELAP	0.0070	0.0200	X	217	mg/L	1	02/08/2018 23:37	138775
Lead	NELAP	0.0060	0.0070	X	0.119	mg/L	1	02/08/2018 23:37	138775
Manganese	NELAP	0.0016	0.0050	X	2.55	mg/L	1	02/08/2018 23:37	138775
Nickel	NELAP	0.0033	0.0100	X	0.193	mg/L	1	02/08/2018 23:37	138775
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 23:37	138775
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 23:37	138775
Zinc	NELAP	0.0021	0.0100		0.442	mg/L	1	02/08/2018 23:37	138775
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		0.0010	mg/L	5	02/08/2018 18:15	138777
Thallium	NELAP	0.0005	0.0010	X	0.0022	mg/L	5	02/09/2018 16:50	138777
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00027	mg/L	1	02/08/2018 13:18	138782
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.50	5.00		< 5.00	mg/Kg-dry	1	02/07/2018 11:22	138745
Arsenic	NELAP	0.94	2.36		9.29	mg/Kg-dry	1	02/07/2018 15:39	138732
Barium	NELAP	0.09	0.24		68.9	mg/Kg-dry	1	02/07/2018 15:39	138732
Beryllium	NELAP	0.03	0.05		1.07	mg/Kg-dry	1	02/07/2018 15:39	138732
Boron	NELAP	0.47	1.89		8.82	mg/Kg-dry	1	02/07/2018 15:39	138732
Cadmium	NELAP	0.05	0.19		0.28	mg/Kg-dry	1	02/07/2018 15:39	138732
Chromium	NELAP	0.19	0.47	X	18.5	mg/Kg-dry	1	02/07/2018 15:39	138732



Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-008

Client Sample ID: 2291V-6-B07

Matrix: SOLID

Collection Date: 02/01/2018 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Cobalt	NELAP	0.19	0.47		7.78	mg/Kg-dry	1	02/07/2018 15:39	138732
Copper	NELAP	0.14	0.47		21.1	mg/Kg-dry	1	02/07/2018 15:39	138732
Iron	NELAP	0.94	1.89	X	23000	mg/Kg-dry	1	02/07/2018 15:39	138732
Lead	NELAP	0.47	1.42		17.3	mg/Kg-dry	1	02/07/2018 15:39	138732
Magnesium	NELAP	0.38	4.72		18400	mg/Kg-dry	1	02/07/2018 15:39	138732
Manganese	NELAP	0.07	0.28		551	mg/Kg-dry	1	02/07/2018 15:39	138732
Nickel	NELAP	0.19	0.47		21.4	mg/Kg-dry	1	02/07/2018 15:39	138732
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/07/2018 15:39	138732
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/07/2018 15:39	138732
Vanadium	NELAP	0.19	0.94		41.0	mg/Kg-dry	1	02/07/2018 15:39	138732
Zinc	NELAP	0.38	0.94		53.4	mg/Kg-dry	1	02/07/2018 15:39	138732
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/09/2018 11:09	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.010		0.017	mg/Kg-dry	1	02/06/2018 11:06	138688
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.137	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
1,2-Dichlorobenzene	NELAP	0.164	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
1,3-Dichlorobenzene	NELAP	0.173	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
1,4-Dichlorobenzene	NELAP	0.164	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,4,5-Trichlorophenol	NELAP	0.113	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,4,6-Trichlorophenol	NELAP	0.130	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,4-Dichlorophenol	NELAP	0.125	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,4-Dimethylphenol	NELAP	0.131	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,4-Dinitrophenol	NELAP	0.110	1.03		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,4-Dinitrotoluene	NELAP	0.107	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2,6-Dinitrotoluene	NELAP	0.111	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2-Chloronaphthalene	NELAP	0.124	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2-Chlorophenol	NELAP	0.131	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2-Methylnaphthalene	NELAP	0.123	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2-Nitroaniline	NELAP	0.165	1.03		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
2-Nitrophenol	NELAP	0.115	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
3,3'-Dichlorobenzidine	NELAP	0.206	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
3-Nitroaniline	NELAP	0.155	1.03		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4,6-Dinitro-2-methylphenol	NELAP	0.111	1.03		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4-Bromophenyl phenyl ether	NELAP	0.095	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4-Chloro-3-methylphenol	NELAP	0.113	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4-Chloroaniline	NELAP	0.155	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4-Chlorophenyl phenyl ether	NELAP	0.102	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4-Nitroaniline	NELAP	0.155	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
4-Nitrophenol	NELAP	0.124	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Acenaphthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Acenaphthylene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Benzo(a)anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Benzo(a)pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Benzo(b)fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-008

Client Sample ID: 2291V-6-B07

Matrix: SOLID

Collection Date: 02/01/2018 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(g,h,i)perylene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Benzo(k)fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Bis(2-chloroethoxy)methane	NELAP	0.121	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Bis(2-chloroethyl)ether	NELAP	0.146	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Bis(2-chloroisopropyl)ether	NELAP	0.118	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Bis(2-ethylhexyl)phthalate	NELAP	0.121	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Butyl benzyl phthalate	NELAP	0.104	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Carbazole	NELAP	0.126	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Chrysene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Dibenzo(a,h)anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Dibenzofuran	NELAP	0.155	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Diethyl phthalate	NELAP	0.099	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Dimethyl phthalate	NELAP	0.094	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Di-n-butyl phthalate	NELAP	0.106	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Di-n-octyl phthalate	NELAP	0.107	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Fluorene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Hexachlorobenzene	NELAP	0.172	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Hexachlorobutadiene	NELAP	0.160	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Hexachlorocyclopentadiene	NELAP	0.105	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Hexachloroethane	NELAP	0.172	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Indeno(1,2,3-cd)pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Isophorone	NELAP	0.122	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
m,p-Cresol	NELAP	0.130	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Naphthalene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Nitrobenzene	NELAP	0.129	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
N-Nitroso-di-n-propylamine	NELAP	0.113	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
N-Nitrosodiphenylamine	NELAP	0.095	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
o-Cresol	NELAP	0.122	0.516		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Pentachlorophenol	NELAP	0.681	2.06		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Phenanthrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Phenol	NELAP	0.120	0.361		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/09/2018 18:21	138867
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		45.1	%REC	1	02/09/2018 18:21	138867
Surr: 2-Fluorobiphenyl	*	0	29.3-105		37.8	%REC	1	02/09/2018 18:21	138867
Surr: 2-Fluorophenol	*	0	35.8-97.2	S	35.7	%REC	1	02/09/2018 18:21	138867
Surr: Nitrobenzene-d5	*	0	36.2-95.2	S	34.4	%REC	1	02/09/2018 18:21	138867
Surr: Phenol-d5	*	0	38.8-103	S	36.5	%REC	1	02/09/2018 18:21	138867
Surr: p-Terphenyl-d14	*	0	43.2-116		45.0	%REC	1	02/09/2018 18:21	138867

Surrogate recovery is outside QC limits due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
1,1,2-Trichloroethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
1,1-Dichloroethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
1,1-Dichloroethene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
1,2-Dichloroethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-008

Client Sample ID: 2291V-6-B07

Matrix: SOLID

Collection Date: 02/01/2018 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2-Dichloropropane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
1,3-Dichloropropene, Total	*	0.00253	0.0101		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
2-Butanone	NELAP	0.317	0.507		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
2-Hexanone	NELAP	0.0253	0.127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
4-Methyl-2-pentanone	NELAP	0.0253	0.127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Acetone	NELAP	0.0418	0.127		0.248	mg/Kg-dry	1	02/06/2018 19:26	138748
Benzene	NELAP	0.00127	0.0025		0.0059	mg/Kg-dry	1	02/06/2018 19:26	138748
Bromodichloromethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Bromoform	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Bromomethane	NELAP	0.00633	0.0253		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Carbon disulfide	NELAP	0.00760	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Carbon tetrachloride	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Chlorobenzene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Chloroethane	NELAP	0.00507	0.0253		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Chloroform	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Chloromethane	NELAP	0.00507	0.0253		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
cis-1,2-Dichloroethene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
cis-1,3-Dichloropropene	NELAP	0.00253	0.0101		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Dibromochloromethane	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Ethylbenzene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
m,p-Xylenes	NELAP	0.00507	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Methyl tert-butyl ether	NELAP	0.00127	0.0051		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Methylene chloride	NELAP	0.00337	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
o-Xylene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Styrene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Tetrachloroethene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Toluene	NELAP	0.00253	0.0127	J	0.0076	mg/Kg-dry	1	02/06/2018 19:26	138748
trans-1,2-Dichloroethene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
trans-1,3-Dichloropropene	NELAP	0.00253	0.0101		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Trichloroethene	NELAP	0.00253	0.0127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Vinyl acetate	NELAP	0.0507	0.127		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Vinyl chloride	NELAP	0.00127	0.0051		ND	mg/Kg-dry	1	02/06/2018 19:26	138748
Xylenes, Total	NELAP	0.00253	0.0127	J	0.0037	mg/Kg-dry	1	02/06/2018 19:26	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		117.9	%REC	1	02/06/2018 19:26	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		112.6	%REC	1	02/06/2018 19:26	138748
Surr: Dibromofluoromethane	*	0	77.7-120		106.9	%REC	1	02/06/2018 19:26	138748
Surr: Toluene-d8	*	0	86-116		99.6	%REC	1	02/06/2018 19:26	138748

LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-009

Client Sample ID: 2291V-6-B07 DUP

Matrix: SOLID

Collection Date: 02/01/2018 10:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		18.1	%	1	02/07/2018 13:53	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		81.9	%	1	02/07/2018 13:53	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.27	J	0.16	mg/Kg-dry	1	02/08/2018 16:18	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.05		1	02/06/2018 18:32	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.0954	mg/L	1	02/13/2018 11:40	138917
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 11:40	138917
Manganese	NELAP	0.0016	0.0050		0.556	mg/L	1	02/13/2018 11:40	138917
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	0.0178	mg/L	1	02/08/2018 23:41	138775
Barium	NELAP	0.0024	0.0050		0.253	mg/L	1	02/08/2018 23:41	138775
Beryllium	NELAP	0.0003	0.0010		0.0016	mg/L	1	02/08/2018 23:41	138775
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 23:41	138775
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 23:41	138775
Chromium	NELAP	0.0040	0.0100		0.0470	mg/L	1	02/08/2018 23:41	138775
Cobalt	NELAP	0.0022	0.0100	J	0.0092	mg/L	1	02/08/2018 23:41	138775
Iron	NELAP	0.0070	0.0200	X	45.2	mg/L	1	02/08/2018 23:41	138775
Lead	NELAP	0.0060	0.0070	X	0.0681	mg/L	1	02/08/2018 23:41	138775
Manganese	NELAP	0.0016	0.0050	X	0.581	mg/L	1	02/08/2018 23:41	138775
Nickel	NELAP	0.0033	0.0100		0.0371	mg/L	1	02/08/2018 23:41	138775
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 23:41	138775
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 23:41	138775
Zinc	NELAP	0.0021	0.0100		0.166	mg/L	1	02/08/2018 23:41	138775
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0009	mg/L	5	02/08/2018 18:23	138777
Thallium	NELAP	0.0005	0.0010	J	0.0006	mg/L	5	02/09/2018 16:58	138777
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100		< 0.00100	mg/L	1	02/08/2018 13:20	138782
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		< 4.81	mg/Kg-dry	1	02/07/2018 11:26	138745
Arsenic	NELAP	0.93	2.31		5.73	mg/Kg-dry	1	02/07/2018 15:45	138732
Barium	NELAP	0.09	0.23		59.4	mg/Kg-dry	1	02/07/2018 15:45	138732
Beryllium	NELAP	0.03	0.05		0.60	mg/Kg-dry	1	02/07/2018 15:45	138732
Boron	NELAP	0.46	1.85		9.69	mg/Kg-dry	1	02/07/2018 15:45	138732
Cadmium	NELAP	0.05	0.19		0.43	mg/Kg-dry	1	02/07/2018 15:45	138732
Chromium	NELAP	0.19	0.46	X	24.5	mg/Kg-dry	1	02/07/2018 15:45	138732
Cobalt	NELAP	0.19	0.46		5.08	mg/Kg-dry	1	02/07/2018 15:45	138732
Copper	NELAP	0.14	0.46		32.4	mg/Kg-dry	1	02/07/2018 15:45	138732
Iron	NELAP	0.93	1.85	X	15900	mg/Kg-dry	1	02/07/2018 15:45	138732
Lead	NELAP	0.46	1.39		68.6	mg/Kg-dry	1	02/07/2018 15:45	138732
Magnesium	NELAP	0.37	4.63		48300	mg/Kg-dry	1	02/07/2018 15:45	138732
Manganese	NELAP	0.06	0.28		478	mg/Kg-dry	1	02/07/2018 15:45	138732



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-009

Client Sample ID: 2291V-6-B07 DUP

Matrix: SOLID

Collection Date: 02/01/2018 10:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Nickel	NELAP	0.19	0.46		13.7	mg/Kg-dry	1	02/07/2018 15:45	138732
Silver	NELAP	0.14	0.46		< 0.46	mg/Kg-dry	1	02/07/2018 15:45	138732
Thallium	NELAP	1.39	2.41		< 2.41	mg/Kg-dry	1	02/07/2018 15:45	138732
Vanadium	NELAP	0.19	0.93		24.2	mg/Kg-dry	1	02/07/2018 15:45	138732
Zinc	NELAP	0.37	0.93		123	mg/Kg-dry	1	02/07/2018 15:45	138732
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.37	0.93		< 0.93	mg/Kg-dry	10	02/09/2018 11:17	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.022	mg/Kg-dry	1	02/06/2018 11:09	138688
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.482	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
1,2-Dichlorobenzene	NELAP	0.576	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
1,3-Dichlorobenzene	NELAP	0.609	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
1,4-Dichlorobenzene	NELAP	0.576	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,4,5-Trichlorophenol	NELAP	0.399	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,4,6-Trichlorophenol	NELAP	0.457	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,4-Dichlorophenol	NELAP	0.439	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,4-Dimethylphenol	NELAP	0.460	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,4-Dinitrophenol	NELAP	0.388	3.63		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,4-Dinitrotoluene	NELAP	0.377	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2,6-Dinitrotoluene	NELAP	0.392	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2-Chloronaphthalene	NELAP	0.435	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2-Chlorophenol	NELAP	0.460	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2-Methylnaphthalene	NELAP	0.431	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2-Nitroaniline	NELAP	0.580	3.63		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
2-Nitrophenol	NELAP	0.406	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
3,3'-Dichlorobenzidine	NELAP	0.725	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
3-Nitroaniline	NELAP	0.544	3.63		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4,6-Dinitro-2-methylphenol	NELAP	0.392	3.63		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4-Bromophenyl phenyl ether	NELAP	0.334	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4-Chloro-3-methylphenol	NELAP	0.399	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4-Chloroaniline	NELAP	0.544	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4-Chlorophenyl phenyl ether	NELAP	0.359	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4-Nitroaniline	NELAP	0.544	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
4-Nitrophenol	NELAP	0.435	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Acenaphthene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Acenaphthylene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Anthracene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Benzo(a)anthracene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Benzo(a)pyrene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Benzo(b)fluoranthene	NELAP	0.061	0.123	J	0.075	mg/Kg-dry	1	02/12/2018 10:40	138867
Benzo(g,h,i)perylene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Benzo(k)fluoranthene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Bis(2-chloroethoxy)methane	NELAP	0.424	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Bis(2-chloroethyl)ether	NELAP	0.515	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Bis(2-chloroisopropyl)ether	NELAP	0.413	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Bis(2-ethylhexyl)phthalate	NELAP	0.424	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-009

Client Sample ID: 2291V-6-B07 DUP

Matrix: SOLID

Collection Date: 02/01/2018 10:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Butyl benzyl phthalate	NELAP	0.366	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Carbazole	NELAP	0.442	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Chrysene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Dibenzo(a,h)anthracene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Dibenzofuran	NELAP	0.544	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Diethyl phthalate	NELAP	0.348	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Dimethyl phthalate	NELAP	0.330	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Di-n-butyl phthalate	NELAP	0.373	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Di-n-octyl phthalate	NELAP	0.377	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Fluoranthene	NELAP	0.061	0.123	J	0.075	mg/Kg-dry	1	02/12/2018 10:40	138867
Fluorene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Hexachlorobenzene	NELAP	0.605	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Hexachlorobutadiene	NELAP	0.562	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Hexachlorocyclopentadiene	NELAP	0.370	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Hexachloroethane	NELAP	0.605	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Indeno(1,2,3-cd)pyrene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Isophorone	NELAP	0.428	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
m,p-Cresol	NELAP	0.457	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Naphthalene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Nitrobenzene	NELAP	0.453	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
N-Nitroso-di-n-propylamine	NELAP	0.399	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
N-Nitrosodiphenylamine	NELAP	0.334	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
o-Cresol	NELAP	0.428	1.81		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Pentachlorophenol	NELAP	2.39	7.25		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Phenanthrene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Phenol	NELAP	0.421	1.27		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Pyrene	NELAP	0.061	0.123		ND	mg/Kg-dry	1	02/12/2018 10:40	138867
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		52.2	%REC	1	02/12/2018 10:40	138867
Surr: 2-Fluorobiphenyl	*	0	29.3-105		43.5	%REC	1	02/12/2018 10:40	138867
Surr: 2-Fluorophenol	*	0	35.8-97.2		40.8	%REC	1	02/12/2018 10:40	138867
Surr: Nitrobenzene-d5	*	0	36.2-95.2		40.6	%REC	1	02/12/2018 10:40	138867
Surr: Phenol-d5	*	0	38.8-103		42.6	%REC	1	02/12/2018 10:40	138867
Surr: p-Terphenyl-d14	*	0	43.2-116		49.3	%REC	1	02/12/2018 10:40	138867

*Elevated reporting limit due to sample composition.*

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,1,2-Trichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,1-Dichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,1-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,2-Dichloroethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,2-Dichloropropane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
1,3-Dichloropropene, Total	*	0.00098	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
2-Butanone	NELAP	0.122	0.195		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
2-Hexanone	NELAP	0.00975	0.0487		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
4-Methyl-2-pentanone	NELAP	0.00975	0.0487		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Acetone	NELAP	0.0161	0.0487		0.0931	mg/Kg-dry	1	02/06/2018 19:52	138748



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-009

Client Sample ID: 2291V-6-B07 DUP

Matrix: SOLID

Collection Date: 02/01/2018 10:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzene	NELAP	0.00049	0.0010		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Bromodichloromethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Bromoform	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Bromomethane	NELAP	0.00244	0.0098		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Carbon disulfide	NELAP	0.00292	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Carbon tetrachloride	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Chlorobenzene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Chloroethane	NELAP	0.00195	0.0098		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Chloroform	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Chloromethane	NELAP	0.00195	0.0098		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
cis-1,2-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
cis-1,3-Dichloropropene	NELAP	0.00098	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Dibromochloromethane	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Ethylbenzene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
m,p-Xylenes	NELAP	0.00195	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Methyl tert-butyl ether	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Methylene chloride	NELAP	0.00130	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
o-Xylene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Styrene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Tetrachloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Toluene	NELAP	0.00098	0.0049	J	<b>0.0010</b>	mg/Kg-dry	1	02/06/2018 19:52	138748
trans-1,2-Dichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
trans-1,3-Dichloropropene	NELAP	0.00098	0.0039		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Trichloroethene	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Vinyl acetate	NELAP	0.0195	0.0487		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Vinyl chloride	NELAP	0.00049	0.0020		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Xylenes, Total	NELAP	0.00098	0.0049		ND	mg/Kg-dry	1	02/06/2018 19:52	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>113.1</b>	%REC	1	02/06/2018 19:52	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>103.5</b>	%REC	1	02/06/2018 19:52	138748
Surr: Dibromofluoromethane	*	0	77.7-120		<b>105.1</b>	%REC	1	02/06/2018 19:52	138748
Surr: Toluene-d8	*	0	86-116		<b>94.2</b>	%REC	1	02/06/2018 19:52	138748

*LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-010

Client Sample ID: 2291V-6-B08

Matrix: SOLID

Collection Date: 02/01/2018 10:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.0</b>	%	1	02/07/2018 13:53	R243278
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>80.0</b>	%	1	02/07/2018 13:53	R243278
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30		<b>&lt; 0.30</b>	mg/Kg-dry	1	02/08/2018 16:36	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.08</b>		1	02/06/2018 18:36	R243207
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/13/2018 11:43	138917
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0004</b>	mg/L	1	02/13/2018 11:43	138917
Chromium	NELAP	0.0020	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/13/2018 11:43	138917
Iron	NELAP	0.0070	0.0200		<b>0.0940</b>	mg/L	1	02/13/2018 11:43	138917
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/13/2018 11:43	138917
Manganese	NELAP	0.0016	0.0050		<b>0.0106</b>	mg/L	1	02/13/2018 11:43	138917
Nickel	NELAP	0.0033	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/13/2018 11:43	138917
<b>SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY IC PMS</b>									
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/14/2018 19:13	138918
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	<b>0.0890</b>	mg/L	1	02/08/2018 23:45	138775
Barium	NELAP	0.0024	0.0050		<b>1.31</b>	mg/L	1	02/08/2018 23:45	138775
Beryllium	NELAP	0.0003	0.0010	X	<b>0.0099</b>	mg/L	1	02/08/2018 23:45	138775
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/08/2018 23:45	138775
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/08/2018 23:45	138775
Chromium	NELAP	0.0040	0.0100	X	<b>0.253</b>	mg/L	1	02/08/2018 23:45	138775
Cobalt	NELAP	0.0022	0.0100		<b>0.0637</b>	mg/L	1	02/08/2018 23:45	138775
Iron	NELAP	0.0070	0.0200	X	<b>274</b>	mg/L	1	02/08/2018 23:45	138775
Lead	NELAP	0.0060	0.0070	X	<b>0.108</b>	mg/L	1	02/08/2018 23:45	138775
Manganese	NELAP	0.0016	0.0050	X	<b>4.21</b>	mg/L	1	02/08/2018 23:45	138775
Nickel	NELAP	0.0033	0.0100	X	<b>0.245</b>	mg/L	1	02/08/2018 23:45	138775
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/08/2018 23:45	138775
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/08/2018 23:45	138775
Zinc	NELAP	0.0021	0.0100		<b>0.536</b>	mg/L	1	02/08/2018 23:45	138775
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0008</b>	mg/L	5	02/09/2018 17:07	138777
Thallium	NELAP	0.0005	0.0010	X	<b>0.0026</b>	mg/L	5	02/09/2018 17:07	138777
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	<b>0.00056</b>	mg/L	1	02/08/2018 13:23	138782
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		<b>&lt; 4.81</b>	mg/Kg-dry	1	02/07/2018 11:30	138745
Arsenic	NELAP	0.94	2.36		<b>9.57</b>	mg/Kg-dry	1	02/07/2018 15:51	138732
Barium	NELAP	0.09	0.24		<b>127</b>	mg/Kg-dry	1	02/07/2018 15:51	138732
Beryllium	NELAP	0.03	0.05		<b>1.35</b>	mg/Kg-dry	1	02/07/2018 15:51	138732
Boron	NELAP	0.47	1.89		<b>9.91</b>	mg/Kg-dry	1	02/07/2018 15:51	138732
Cadmium	NELAP	0.05	0.19		<b>0.31</b>	mg/Kg-dry	1	02/07/2018 15:51	138732
Chromium	NELAP	0.19	0.47	X	<b>27.7</b>	mg/Kg-dry	1	02/07/2018 15:51	138732



Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-010

Client Sample ID: 2291V-6-B08

Matrix: SOLID

Collection Date: 02/01/2018 10:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Cobalt	NELAP	0.19	0.47		10.8	mg/Kg-dry	1	02/07/2018 15:51	138732
Copper	NELAP	0.14	0.47		25.6	mg/Kg-dry	1	02/07/2018 15:51	138732
Iron	NELAP	0.94	1.89	X	29300	mg/Kg-dry	1	02/07/2018 15:51	138732
Lead	NELAP	0.47	1.42		13.9	mg/Kg-dry	1	02/07/2018 15:51	138732
Magnesium	NELAP	0.38	4.72		4720	mg/Kg-dry	1	02/07/2018 15:51	138732
Manganese	NELAP	0.07	0.28	X	807	mg/Kg-dry	1	02/07/2018 15:51	138732
Nickel	NELAP	0.19	0.47		30.6	mg/Kg-dry	1	02/07/2018 15:51	138732
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/07/2018 15:51	138732
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/07/2018 15:51	138732
Vanadium	NELAP	0.19	0.94		46.6	mg/Kg-dry	1	02/07/2018 15:51	138732
Zinc	NELAP	0.38	0.94		57.9	mg/Kg-dry	1	02/07/2018 15:51	138732
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/07/2018 21:04	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.049	mg/Kg-dry	1	02/06/2018 11:11	138688
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
1,2-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
1,3-Dichlorobenzene	NELAP	0.210	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
1,4-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,4,5-Trichlorophenol	NELAP	0.137	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,4,6-Trichlorophenol	NELAP	0.157	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,4-Dichlorophenol	NELAP	0.151	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,4-Dimethylphenol	NELAP	0.158	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,4-Dinitrophenol	NELAP	0.133	1.25		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,4-Dinitrotoluene	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2,6-Dinitrotoluene	NELAP	0.135	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2-Chloronaphthalene	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2-Chlorophenol	NELAP	0.158	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2-Methylnaphthalene	NELAP	0.148	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
2-Nitrophenol	NELAP	0.140	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
3,3'-Dichlorobenzidine	NELAP	0.250	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
3-Nitroaniline	NELAP	0.187	1.25		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4-Bromophenyl phenyl ether	NELAP	0.115	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4-Chloro-3-methylphenol	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4-Chloroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4-Chlorophenyl phenyl ether	NELAP	0.124	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4-Nitroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
4-Nitrophenol	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-010

Client Sample ID: 2291V-6-B08

Matrix: SOLID

Collection Date: 02/01/2018 10:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Bis(2-chloroethoxy)methane	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Bis(2-chloroethyl)ether	NELAP	0.177	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Bis(2-chloroisopropyl)ether	NELAP	0.142	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Butyl benzyl phthalate	NELAP	0.126	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Carbazole	NELAP	0.152	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Dibenzofuran	NELAP	0.187	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Diethyl phthalate	NELAP	0.120	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Dimethyl phthalate	NELAP	0.114	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Di-n-butyl phthalate	NELAP	0.128	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Di-n-octyl phthalate	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Hexachlorobenzene	NELAP	0.208	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Hexachlorobutadiene	NELAP	0.193	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Hexachlorocyclopentadiene	NELAP	0.127	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Hexachloroethane	NELAP	0.208	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Isophorone	NELAP	0.147	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
m,p-Cresol	NELAP	0.157	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Nitrobenzene	NELAP	0.156	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
N-Nitroso-di-n-propylamine	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
N-Nitrosodiphenylamine	NELAP	0.115	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
o-Cresol	NELAP	0.147	0.624		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Pentachlorophenol	NELAP	0.823	2.50		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Phenol	NELAP	0.145	0.437		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 18:49	138867
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		77.0	%REC	1	02/09/2018 18:49	138867
Surr: 2-Fluorobiphenyl	*	0	29.3-105		65.6	%REC	1	02/09/2018 18:49	138867
Surr: 2-Fluorophenol	*	0	35.8-97.2		63.4	%REC	1	02/09/2018 18:49	138867
Surr: Nitrobenzene-d5	*	0	36.2-95.2		58.4	%REC	1	02/09/2018 18:49	138867
Surr: Phenol-d5	*	0	38.8-103		63.1	%REC	1	02/09/2018 18:49	138867
Surr: p-Terphenyl-d14	*	0	43.2-116		75.3	%REC	1	02/09/2018 18:49	138867
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
1,1,2,2-Tetrachloroethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
1,1,2-Trichloroethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
1,1-Dichloroethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
1,1-Dichloroethene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
1,2-Dichloroethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
1,2-Dichloropropane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-010

Client Sample ID: 2291V-6-B08

Matrix: SOLID

Collection Date: 02/01/2018 10:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,3-Dichloropropene, Total	*	0.00090	0.0036		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
2-Butanone	NELAP	0.113	0.181		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
2-Hexanone	NELAP	0.00904	0.0452		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
4-Methyl-2-pentanone	NELAP	0.00904	0.0452		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Acetone	NELAP	0.0149	0.0452		0.110	mg/Kg-dry	1	02/06/2018 20:18	138748
Benzene	NELAP	0.00045	0.0009		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Bromodichloromethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Bromoform	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Bromomethane	NELAP	0.00226	0.0090		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Carbon disulfide	NELAP	0.00271	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Carbon tetrachloride	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Chlorobenzene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Chloroethane	NELAP	0.00181	0.0090		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Chloroform	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Chloromethane	NELAP	0.00181	0.0090		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
cis-1,2-Dichloroethene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
cis-1,3-Dichloropropene	NELAP	0.00090	0.0036		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Dibromochloromethane	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Ethylbenzene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
m,p-Xylenes	NELAP	0.00181	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Methyl tert-butyl ether	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Methylene chloride	NELAP	0.00120	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
o-Xylene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Styrene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Tetrachloroethene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Toluene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
trans-1,2-Dichloroethene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
trans-1,3-Dichloropropene	NELAP	0.00090	0.0036		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Trichloroethene	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Vinyl acetate	NELAP	0.0181	0.0452		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Vinyl chloride	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Xylenes, Total	NELAP	0.00090	0.0045		ND	mg/Kg-dry	1	02/06/2018 20:18	138748
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		115.1	%REC	1	02/06/2018 20:18	138748
Surr: 4-Bromofluorobenzene	*	0	82.1-116		100.4	%REC	1	02/06/2018 20:18	138748
Surr: Dibromofluoromethane	*	0	77.7-120		105.3	%REC	1	02/06/2018 20:18	138748
Surr: Toluene-d8	*	0	86-116		94.8	%REC	1	02/06/2018 20:18	138748

LCS recovered outside upper control limits for 1,1-dichloroethane. Sample results are below the reporting limit. Data is reportable per the TNI Standard. Allowable Marginal Exceedance of chloroethane in the laboratory control sample is verified per the TNI Standard.



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-011

Client Sample ID: 2291V-6-B09

Matrix: SOLID

Collection Date: 02/01/2018 10:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.4	%	1	02/06/2018 15:21	R243216
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.6	%	1	02/06/2018 15:21	R243216
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.28	J	0.16	mg/Kg-dry	1	02/08/2018 16:40	138794
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.14		1	02/05/2018 21:52	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/13/2018 11:54	138917
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 11:54	138917
Iron	NELAP	0.0070	0.0200		0.370	mg/L	1	02/13/2018 11:54	138917
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 11:54	138917
Manganese	NELAP	0.0016	0.0050		0.0330	mg/L	1	02/13/2018 11:54	138917
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 11:54	138917
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		0.0474	mg/L	1	02/08/2018 23:48	138775
Barium	NELAP	0.0024	0.0050		1.15	mg/L	1	02/08/2018 23:48	138775
Beryllium	NELAP	0.0003	0.0010	X	0.0061	mg/L	1	02/08/2018 23:48	138775
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 23:48	138775
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 23:48	138775
Chromium	NELAP	0.0040	0.0100	X	0.161	mg/L	1	02/08/2018 23:48	138775
Cobalt	NELAP	0.0022	0.0100		0.0334	mg/L	1	02/08/2018 23:48	138775
Iron	NELAP	0.0070	0.0200	X	154	mg/L	1	02/08/2018 23:48	138775
Lead	NELAP	0.0060	0.0070	X	0.114	mg/L	1	02/08/2018 23:48	138775
Manganese	NELAP	0.0016	0.0050	X	2.52	mg/L	1	02/08/2018 23:48	138775
Nickel	NELAP	0.0033	0.0100	X	0.106	mg/L	1	02/08/2018 23:48	138775
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 23:48	138775
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 23:48	138775
Zinc	NELAP	0.0021	0.0100		0.340	mg/L	1	02/08/2018 23:48	138775
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0008	mg/L	5	02/08/2018 18:39	138777
Thallium	NELAP	0.0005	0.0010		0.0015	mg/L	5	02/09/2018 17:15	138777
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00017	mg/L	1	02/08/2018 13:25	138782
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.47	4.90		< 4.90	mg/Kg-dry	1	02/07/2018 11:52	138745
Arsenic	NELAP	1.00	2.50		7.60	mg/Kg-dry	1	02/07/2018 16:26	138732
Barium	NELAP	0.10	0.25		117	mg/Kg-dry	1	02/07/2018 16:26	138732
Beryllium	NELAP	0.03	0.05		0.96	mg/Kg-dry	1	02/07/2018 16:26	138732
Boron	NELAP	0.50	2.00		6.92	mg/Kg-dry	1	02/07/2018 16:26	138732
Cadmium	NELAP	0.05	0.20		0.34	mg/Kg-dry	1	02/07/2018 16:26	138732
Chromium	NELAP	0.20	0.50	X	19.4	mg/Kg-dry	1	02/07/2018 16:26	138732
Cobalt	NELAP	0.20	0.50		9.10	mg/Kg-dry	1	02/07/2018 16:26	138732
Copper	NELAP	0.15	0.50		16.1	mg/Kg-dry	1	02/07/2018 16:26	138732
Iron	NELAP	1.00	2.00	X	19200	mg/Kg-dry	1	02/07/2018 16:26	138732

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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Lead	NELAP	0.50	1.50		41.7	mg/Kg-dry	1	02/07/2018 16:26	138732
Magnesium	NELAP	0.40	5.00		11100	mg/Kg-dry	1	02/07/2018 16:26	138732
Manganese	NELAP	0.07	0.30	X	760	mg/Kg-dry	1	02/07/2018 16:26	138732
Nickel	NELAP	0.20	0.50		15.3	mg/Kg-dry	1	02/07/2018 16:26	138732
Silver	NELAP	0.15	0.50		< 0.50	mg/Kg-dry	1	02/07/2018 16:26	138732
Thallium	NELAP	1.50	2.60		< 2.60	mg/Kg-dry	1	02/07/2018 16:26	138732
Vanadium	NELAP	0.20	1.00		35.7	mg/Kg-dry	1	02/07/2018 16:26	138732
Zinc	NELAP	0.40	1.00		55.7	mg/Kg-dry	1	02/07/2018 16:26	138732
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00		< 1.00	mg/Kg-dry	10	02/09/2018 11:25	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.030	mg/Kg-dry	1	02/06/2018 11:13	138688
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.169	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
1,2-Dichlorobenzene	NELAP	0.202	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
1,3-Dichlorobenzene	NELAP	0.214	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
1,4-Dichlorobenzene	NELAP	0.202	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,4,5-Trichlorophenol	NELAP	0.140	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,4,6-Trichlorophenol	NELAP	0.160	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,4-Dichlorophenol	NELAP	0.154	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,4-Dimethylphenol	NELAP	0.162	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,4-Dinitrophenol	NELAP	0.136	1.27		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,4-Dinitrotoluene	NELAP	0.132	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2,6-Dinitrotoluene	NELAP	0.137	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2-Chloronaphthalene	NELAP	0.153	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2-Chlorophenol	NELAP	0.162	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2-Methylnaphthalene	NELAP	0.151	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2-Nitroaniline	NELAP	0.204	1.27		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
2-Nitrophenol	NELAP	0.143	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
3,3'-Dichlorobenzidine	NELAP	0.255	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
3-Nitroaniline	NELAP	0.191	1.27		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4,6-Dinitro-2-methylphenol	NELAP	0.137	1.27		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4-Bromophenyl phenyl ether	NELAP	0.117	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4-Chloro-3-methylphenol	NELAP	0.140	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4-Chloroaniline	NELAP	0.191	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4-Chlorophenyl phenyl ether	NELAP	0.126	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4-Nitroaniline	NELAP	0.191	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
4-Nitrophenol	NELAP	0.153	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Bis(2-chloroethoxy)methane	NELAP	0.149	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867



# Laboratory Results

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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bis(2-chloroethyl)ether	NELAP	0.181	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Bis(2-chloroisopropyl)ether	NELAP	0.145	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Bis(2-ethylhexyl)phthalate	NELAP	0.149	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Butyl benzyl phthalate	NELAP	0.129	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Carbazole	NELAP	0.155	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Dibenzofuran	NELAP	0.191	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Diethyl phthalate	NELAP	0.122	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Dimethyl phthalate	NELAP	0.116	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Di-n-butyl phthalate	NELAP	0.131	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Di-n-octyl phthalate	NELAP	0.132	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Hexachlorobenzene	NELAP	0.213	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Hexachlorobutadiene	NELAP	0.197	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Hexachlorocyclopentadiene	NELAP	0.130	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Hexachloroethane	NELAP	0.213	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Isophorone	NELAP	0.150	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
m,p-Cresol	NELAP	0.160	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Nitrobenzene	NELAP	0.159	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
N-Nitroso-di-n-propylamine	NELAP	0.140	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
N-Nitrosodiphenylamine	NELAP	0.117	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
o-Cresol	NELAP	0.150	0.636		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Pentachlorophenol	NELAP	0.840	2.55		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Phenol	NELAP	0.148	0.445		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/09/2018 19:17	138867
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		82.4	%REC	1	02/09/2018 19:17	138867
Surr: 2-Fluorobiphenyl	*	0	29.3-105		66.8	%REC	1	02/09/2018 19:17	138867
Surr: 2-Fluorophenol	*	0	35.8-97.2		59.8	%REC	1	02/09/2018 19:17	138867
Surr: Nitrobenzene-d5	*	0	36.2-95.2		58.3	%REC	1	02/09/2018 19:17	138867
Surr: Phenol-d5	*	0	38.8-103		60.5	%REC	1	02/09/2018 19:17	138867
Surr: p-Terphenyl-d14	*	0	43.2-116		79.8	%REC	1	02/09/2018 19:17	138867
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,1,1,2,2-Tetrachloroethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,1,2-Trichloroethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,1-Dichloroethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,1-Dichloroethene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,2-Dichloroethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,2-Dichloropropane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
1,3-Dichloropropene, Total	*	0.00089	0.0036		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
2-Butanone	NELAP	0.112	0.178		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
2-Hexanone	NELAP	0.00892	0.0446		ND	mg/Kg-dry	1	02/07/2018 14:05	138823



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<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
4-Methyl-2-pentanone	NELAP	0.00892	0.0446		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Acetone	NELAP	0.0147	0.0446		0.0835	mg/Kg-dry	1	02/07/2018 14:05	138823
Benzene	NELAP	0.00045	0.0009		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Bromodichloromethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Bromoform	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Bromomethane	NELAP	0.00223	0.0089		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Carbon disulfide	NELAP	0.00268	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Carbon tetrachloride	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Chlorobenzene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Chloroethane	NELAP	0.00178	0.0089		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Chloroform	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Chloromethane	NELAP	0.00178	0.0089		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
cis-1,2-Dichloroethene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
cis-1,3-Dichloropropene	NELAP	0.00089	0.0036		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Dibromochloromethane	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Ethylbenzene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
m,p-Xylenes	NELAP	0.00178	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Methyl tert-butyl ether	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Methylene chloride	NELAP	0.00119	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
o-Xylene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Styrene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Tetrachloroethene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Toluene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
trans-1,2-Dichloroethene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
trans-1,3-Dichloropropene	NELAP	0.00089	0.0036		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Trichloroethene	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Vinyl acetate	NELAP	0.0178	0.0446		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Vinyl chloride	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Xylenes, Total	NELAP	0.00089	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:05	138823
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		103.8	%REC	1	02/07/2018 14:05	138823
Surr: 4-Bromofluorobenzene	*	0	82.1-116		97.0	%REC	1	02/07/2018 14:05	138823
Surr: Dibromofluoromethane	*	0	77.7-120		97.8	%REC	1	02/07/2018 14:05	138823
Surr: Toluene-d8	*	0	86-116		98.9	%REC	1	02/07/2018 14:05	138823



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-012

Client Sample ID: 2291V-6-B10

Matrix: SOLID

Collection Date: 02/01/2018 10:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		18.6	%	1	02/06/2018 15:22	R243216
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		81.4	%	1	02/06/2018 15:22	R243216
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30	J	0.14	mg/Kg-dry	1	02/09/2018 13:27	138837
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.71		1	02/05/2018 21:56	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.215	mg/L	1	02/13/2018 11:58	138917
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 11:58	138917
Manganese	NELAP	0.0016	0.0050		0.0167	mg/L	1	02/13/2018 11:58	138917
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		0.0319	mg/L	1	02/08/2018 23:52	138775
Barium	NELAP	0.0024	0.0050		0.544	mg/L	1	02/08/2018 23:52	138775
Beryllium	NELAP	0.0003	0.0010		0.0036	mg/L	1	02/08/2018 23:52	138775
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/08/2018 23:52	138775
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/08/2018 23:52	138775
Chromium	NELAP	0.0040	0.0100		0.0914	mg/L	1	02/08/2018 23:52	138775
Cobalt	NELAP	0.0022	0.0100		0.0204	mg/L	1	02/08/2018 23:52	138775
Iron	NELAP	0.0070	0.0200	X	97.4	mg/L	1	02/08/2018 23:52	138775
Lead	NELAP	0.0060	0.0070	X	0.0477	mg/L	1	02/08/2018 23:52	138775
Manganese	NELAP	0.0016	0.0050	X	1.39	mg/L	1	02/08/2018 23:52	138775
Nickel	NELAP	0.0033	0.0100		0.0653	mg/L	1	02/08/2018 23:52	138775
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/08/2018 23:52	138775
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/08/2018 23:52	138775
Zinc	NELAP	0.0021	0.0100		0.192	mg/L	1	02/08/2018 23:52	138775
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0007	mg/L	5	02/08/2018 18:48	138777
Thallium	NELAP	0.0005	0.0010	J	0.0009	mg/L	5	02/09/2018 17:23	138777
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00015	mg/L	1	02/08/2018 13:27	138782
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		< 4.63	mg/Kg-dry	1	02/07/2018 11:55	138745
Arsenic	NELAP	0.94	2.36		9.51	mg/Kg-dry	1	02/07/2018 16:32	138732
Barium	NELAP	0.09	0.24		139	mg/Kg-dry	1	02/07/2018 16:32	138732
Beryllium	NELAP	0.03	0.05		1.26	mg/Kg-dry	1	02/07/2018 16:32	138732
Boron	NELAP	0.47	1.89		7.67	mg/Kg-dry	1	02/07/2018 16:32	138732
Cadmium	NELAP	0.05	0.19		0.30	mg/Kg-dry	1	02/07/2018 16:32	138732
Chromium	NELAP	0.19	0.47	X	26.0	mg/Kg-dry	1	02/07/2018 16:32	138732
Cobalt	NELAP	0.19	0.47		12.4	mg/Kg-dry	1	02/07/2018 16:32	138732
Copper	NELAP	0.14	0.47		13.9	mg/Kg-dry	1	02/07/2018 16:32	138732
Iron	NELAP	0.94	1.89	X	26600	mg/Kg-dry	1	02/07/2018 16:32	138732
Lead	NELAP	0.47	1.42		16.2	mg/Kg-dry	1	02/07/2018 16:32	138732
Magnesium	NELAP	0.38	4.72		4250	mg/Kg-dry	1	02/07/2018 16:32	138732
Manganese	NELAP	0.07	0.28	X	800	mg/Kg-dry	1	02/07/2018 16:32	138732





## Laboratory Results

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Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-012

Client Sample ID: 2291V-6-B10

Matrix: SOLID

Collection Date: 02/01/2018 10:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Nickel	NELAP	0.19	0.47		20.5	mg/Kg-dry	1	02/07/2018 16:32	138732
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/07/2018 16:32	138732
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/07/2018 16:32	138732
Vanadium	NELAP	0.19	0.94		47.6	mg/Kg-dry	1	02/07/2018 16:32	138732
Zinc	NELAP	0.38	0.94		53.0	mg/Kg-dry	1	02/07/2018 16:32	138732
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94	J	0.39	mg/Kg-dry	10	02/07/2018 21:20	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.035	mg/Kg-dry	1	02/06/2018 11:15	138688
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.164	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
1,2-Dichlorobenzene	NELAP	0.196	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
1,3-Dichlorobenzene	NELAP	0.207	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
1,4-Dichlorobenzene	NELAP	0.196	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,4,5-Trichlorophenol	NELAP	0.136	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,4,6-Trichlorophenol	NELAP	0.155	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,4-Dichlorophenol	NELAP	0.149	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,4-Dimethylphenol	NELAP	0.157	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,4-Dinitrophenol	NELAP	0.132	1.23		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,4-Dinitrotoluene	NELAP	0.128	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2,6-Dinitrotoluene	NELAP	0.133	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2-Chloronaphthalene	NELAP	0.148	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2-Chlorophenol	NELAP	0.157	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2-Methylnaphthalene	NELAP	0.147	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2-Nitroaniline	NELAP	0.197	1.23		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
2-Nitrophenol	NELAP	0.138	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
3,3'-Dichlorobenzidine	NELAP	0.247	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
3-Nitroaniline	NELAP	0.185	1.23		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4,6-Dinitro-2-methylphenol	NELAP	0.133	1.23		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4-Bromophenyl phenyl ether	NELAP	0.113	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4-Chloro-3-methylphenol	NELAP	0.136	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4-Chloroaniline	NELAP	0.185	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4-Chlorophenyl phenyl ether	NELAP	0.122	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4-Nitroaniline	NELAP	0.185	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
4-Nitrophenol	NELAP	0.148	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Bis(2-chloroethoxy)methane	NELAP	0.144	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Bis(2-chloroethyl)ether	NELAP	0.175	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Bis(2-chloroisopropyl)ether	NELAP	0.141	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Bis(2-ethylhexyl)phthalate	NELAP	0.144	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-012

Client Sample ID: 2291V-6-B10

Matrix: SOLID

Collection Date: 02/01/2018 10:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Butyl benzyl phthalate	NELAP	0.124	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Carbazole	NELAP	0.150	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Dibenzofuran	NELAP	0.185	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Diethyl phthalate	NELAP	0.118	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Dimethyl phthalate	NELAP	0.112	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Di-n-butyl phthalate	NELAP	0.127	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Di-n-octyl phthalate	NELAP	0.128	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Hexachlorobenzene	NELAP	0.206	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Hexachlorobutadiene	NELAP	0.191	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Hexachlorocyclopentadiene	NELAP	0.126	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Hexachloroethane	NELAP	0.206	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Isophorone	NELAP	0.145	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
m,p-Cresol	NELAP	0.155	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Nitrobenzene	NELAP	0.154	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
N-Nitroso-di-n-propylamine	NELAP	0.136	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
N-Nitrosodiphenylamine	NELAP	0.113	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
o-Cresol	NELAP	0.145	0.616		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Pentachlorophenol	NELAP	0.813	2.47		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Phenol	NELAP	0.143	0.431		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/09/2018 19:45	138867
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		80.3	%REC	1	02/09/2018 19:45	138867
Surr: 2-Fluorobiphenyl	*	0	29.3-105		67.5	%REC	1	02/09/2018 19:45	138867
Surr: 2-Fluorophenol	*	0	35.8-97.2		66.3	%REC	1	02/09/2018 19:45	138867
Surr: Nitrobenzene-d5	*	0	36.2-95.2		60.5	%REC	1	02/09/2018 19:45	138867
Surr: Phenol-d5	*	0	38.8-103		65.0	%REC	1	02/09/2018 19:45	138867
Surr: p-Terphenyl-d14	*	0	43.2-116		75.2	%REC	1	02/09/2018 19:45	138867
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,1,2,2-Tetrachloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,1,2-Trichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,1-Dichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,1-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,2-Dichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,2-Dichloropropane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
1,3-Dichloropropene, Total	*	0.00091	0.0036		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
2-Butanone	NELAP	0.113	0.181		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
2-Hexanone	NELAP	0.00905	0.0453		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
4-Methyl-2-pentanone	NELAP	0.00905	0.0453		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Acetone	NELAP	0.0149	0.0453		0.0583	mg/Kg-dry	1	02/07/2018 14:31	138823
Benzene	NELAP	0.00045	0.0009		ND	mg/Kg-dry	1	02/07/2018 14:31	138823



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-012

Client Sample ID: 2291V-6-B10

Matrix: SOLID

Collection Date: 02/01/2018 10:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromodichloromethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Bromoform	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Bromomethane	NELAP	0.00226	0.0091		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Carbon disulfide	NELAP	0.00272	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Carbon tetrachloride	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Chlorobenzene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Chloroethane	NELAP	0.00181	0.0091		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Chloroform	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Chloromethane	NELAP	0.00181	0.0091		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
cis-1,2-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
cis-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Dibromochloromethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Ethylbenzene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
m,p-Xylenes	NELAP	0.00181	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Methyl tert-butyl ether	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Methylene chloride	NELAP	0.00120	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
o-Xylene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Styrene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Tetrachloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Toluene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
trans-1,2-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
trans-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Trichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Vinyl acetate	NELAP	0.0181	0.0453		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Vinyl chloride	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Xylenes, Total	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 14:31	138823
Surr: 1,2-Dichloroethane-d4	*		0 72.2-131		104.2	%REC	1	02/07/2018 14:31	138823
Surr: 4-Bromofluorobenzene	*		0 82.1-116		96.0	%REC	1	02/07/2018 14:31	138823
Surr: Dibromofluoromethane	*		0 77.7-120		98.0	%REC	1	02/07/2018 14:31	138823
Surr: Toluene-d8	*		0 86-116		98.7	%REC	1	02/07/2018 14:31	138823

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-014

Client Sample ID: 2291V-6-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		20.7	%	1	02/06/2018 15:22	R243216
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		79.3	%	1	02/06/2018 15:22	R243216
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.13	0.32		< 0.32	mg/Kg-dry	1	02/09/2018 13:35	138837
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.17		1	02/05/2018 22:03	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/13/2018 12:05	138917
Beryllium	NELAP	0.0003	0.0010	J	0.0004	mg/L	1	02/13/2018 12:05	138917
Chromium	NELAP	0.0020	0.0100		< 0.0100	mg/L	1	02/13/2018 12:05	138917
Iron	NELAP	0.0070	0.0200		0.134	mg/L	1	02/13/2018 12:05	138917
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/13/2018 12:05	138917
Manganese	NELAP	0.0016	0.0050		0.0437	mg/L	1	02/13/2018 12:05	138917
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/13/2018 12:05	138917
<b>SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS</b>									
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/14/2018 19:30	138918
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	X	0.0767	mg/L	1	02/09/2018 0:14	138775
Barium	NELAP	0.0024	0.0050		1.10	mg/L	1	02/09/2018 0:14	138775
Beryllium	NELAP	0.0003	0.0010	X	0.0078	mg/L	1	02/09/2018 0:14	138775
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/09/2018 0:14	138775
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/09/2018 0:14	138775
Chromium	NELAP	0.0040	0.0100	X	0.203	mg/L	1	02/09/2018 0:14	138775
Cobalt	NELAP	0.0022	0.0100		0.0538	mg/L	1	02/09/2018 0:14	138775
Iron	NELAP	0.0070	0.0200	X	224	mg/L	1	02/09/2018 0:14	138775
Lead	NELAP	0.0060	0.0070	X	0.0913	mg/L	1	02/09/2018 0:14	138775
Manganese	NELAP	0.0016	0.0050	X	3.97	mg/L	1	02/09/2018 0:14	138775
Nickel	NELAP	0.0033	0.0100	X	0.174	mg/L	1	02/09/2018 0:14	138775
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/09/2018 0:14	138775
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/09/2018 0:14	138775
Zinc	NELAP	0.0021	0.0100		0.421	mg/L	1	02/09/2018 0:14	138775
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		0.0010	mg/L	5	02/08/2018 18:56	138777
Thallium	NELAP	0.0005	0.0010	X	0.0022	mg/L	5	02/09/2018 17:56	138777
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00100	J	0.00041	mg/L	1	02/08/2018 13:38	138782
<i>Hg- Elevated reporting limit due to high levels of target or non-target analytes.</i>									
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.42	4.72		< 4.72	mg/Kg-dry	1	02/07/2018 12:02	138745
Arsenic	NELAP	0.98	2.45		10.8	mg/Kg-dry	1	02/07/2018 16:44	138732
Barium	NELAP	0.10	0.25		129	mg/Kg-dry	1	02/07/2018 16:44	138732
Beryllium	NELAP	0.03	0.05		1.25	mg/Kg-dry	1	02/07/2018 16:44	138732
Boron	NELAP	0.46	1.85		7.55	mg/Kg-dry	1	02/09/2018 13:57	138860
Cadmium	NELAP	0.05	0.20		0.30	mg/Kg-dry	1	02/07/2018 16:44	138732
Chromium	NELAP	0.20	0.49	X	26.3	mg/Kg-dry	1	02/07/2018 16:44	138732



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-014

Client Sample ID: 2291V-6-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Cobalt	NELAP	0.20	0.49		11.2	mg/Kg-dry	1	02/07/2018 16:44	138732
Copper	NELAP	0.15	0.49		23.8	mg/Kg-dry	1	02/07/2018 16:44	138732
Iron	NELAP	0.98	1.96	XS	29000	mg/Kg-dry	1	02/07/2018 16:44	138732
Lead	NELAP	0.49	1.47		15.2	mg/Kg-dry	1	02/07/2018 16:44	138732
Magnesium	NELAP	0.39	4.90	S	9990	mg/Kg-dry	1	02/07/2018 16:44	138732
Manganese	NELAP	0.07	0.29	XS	892	mg/Kg-dry	1	02/07/2018 16:44	138732
Nickel	NELAP	0.20	0.49		26.2	mg/Kg-dry	1	02/07/2018 16:44	138732
Silver	NELAP	0.60	0.64		< 0.64	mg/Kg-dry	1	02/07/2018 16:44	138732
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/07/2018 16:44	138732
Vanadium	NELAP	0.20	0.98		47.0	mg/Kg-dry	1	02/07/2018 16:44	138732
Zinc	NELAP	0.39	0.98		54.2	mg/Kg-dry	1	02/07/2018 16:44	138732
<i>Matrix spike control limits for Fe, Mg and Mn are not applicable due to high sample/spike ratio. Elevated reporting limit for Ag due to high levels of target and non-target analytes.</i>									
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98		< 0.98	mg/Kg-dry	10	02/07/2018 21:53	138733
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.045	mg/Kg-dry	1	02/06/2018 11:24	138688
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.332	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
1,2-Dichlorobenzene	NELAP	0.397	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
1,3-Dichlorobenzene	NELAP	0.419	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
1,4-Dichlorobenzene	NELAP	0.397	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,4,5-Trichlorophenol	NELAP	0.275	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,4,6-Trichlorophenol	NELAP	0.314	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,4-Dichlorophenol	NELAP	0.302	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,4-Dimethylphenol	NELAP	0.317	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,4-Dinitrophenol	NELAP	0.267	2.50		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,4-Dinitrotoluene	NELAP	0.260	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2,6-Dinitrotoluene	NELAP	0.270	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2-Chloronaphthalene	NELAP	0.299	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2-Chlorophenol	NELAP	0.317	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2-Methylnaphthalene	NELAP	0.297	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2-Nitroaniline	NELAP	0.399	2.50		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
2-Nitrophenol	NELAP	0.280	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
3,3'-Dichlorobenzidine	NELAP	0.499	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
3-Nitroaniline	NELAP	0.374	2.50		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4,6-Dinitro-2-methylphenol	NELAP	0.270	2.50		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4-Bromophenyl phenyl ether	NELAP	0.230	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4-Chloro-3-methylphenol	NELAP	0.275	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4-Chloroaniline	NELAP	0.374	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4-Chlorophenyl phenyl ether	NELAP	0.247	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4-Nitroaniline	NELAP	0.374	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
4-Nitrophenol	NELAP	0.299	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Acenaphthene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Acenaphthylene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Anthracene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Benzo(a)anthracene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-014

Client Sample ID: 2291V-6-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Benzo(a)pyrene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Benzo(b)fluoranthene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Benzo(g,h,i)perylene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Benzo(k)fluoranthene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Bis(2-chloroethoxy)methane	NELAP	0.292	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Bis(2-chloroethyl)ether	NELAP	0.354	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Bis(2-chloroisopropyl)ether	NELAP	0.285	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Bis(2-ethylhexyl)phthalate	NELAP	0.292	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Butyl benzyl phthalate	NELAP	0.252	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Carbazole	NELAP	0.304	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Chrysene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Dibenzo(a,h)anthracene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Dibenzofuran	NELAP	0.374	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Diethyl phthalate	NELAP	0.240	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Dimethyl phthalate	NELAP	0.227	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Di-n-butyl phthalate	NELAP	0.257	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Di-n-octyl phthalate	NELAP	0.260	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Fluoranthene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Fluorene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Hexachlorobenzene	NELAP	0.417	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Hexachlorobutadiene	NELAP	0.387	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Hexachlorocyclopentadiene	NELAP	0.255	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Hexachloroethane	NELAP	0.417	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Indeno(1,2,3-cd)pyrene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Isophorone	NELAP	0.295	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
m,p-Cresol	NELAP	0.314	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Naphthalene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Nitrobenzene	NELAP	0.312	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
N-Nitroso-di-n-propylamine	NELAP	0.275	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
N-Nitrosodiphenylamine	NELAP	0.230	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
o-Cresol	NELAP	0.295	1.25		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Pentachlorophenol	NELAP	1.65	4.99		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Phenanthrene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Phenol	NELAP	0.290	0.874		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Pyrene	NELAP	0.042	0.085		ND	mg/Kg-dry	1	02/09/2018 20:13	138867
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		78.5	%REC	1	02/09/2018 20:13	138867
Surr: 2-Fluorobiphenyl	*	0	29.3-105		65.6	%REC	1	02/09/2018 20:13	138867
Surr: 2-Fluorophenol	*	0	35.8-97.2		59.7	%REC	1	02/09/2018 20:13	138867
Surr: Nitrobenzene-d5	*	0	36.2-95.2		57.1	%REC	1	02/09/2018 20:13	138867
Surr: Phenol-d5	*	0	38.8-103		60.0	%REC	1	02/09/2018 20:13	138867
Surr: p-Terphenyl-d14	*	0	43.2-116		75.8	%REC	1	02/09/2018 20:13	138867

*Elevated reporting limit due to sample composition.*

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
1,1,2,2-Tetrachloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
1,1,2-Trichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
1,1-Dichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823

Client: Andrews Engineering, Inc.

Work Order: 18020120

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 19-Feb-18

Lab ID: 18020120-014

Client Sample ID: 2291V-6-B12

Matrix: SOLID

Collection Date: 02/01/2018 11:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
1,2-Dichloroethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
1,2-Dichloropropane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
1,3-Dichloropropene, Total	*	0.00091	0.0036		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
2-Butanone	NELAP	0.113	0.181		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
2-Hexanone	NELAP	0.00906	0.0453		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
4-Methyl-2-pentanone	NELAP	0.00906	0.0453		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Acetone	NELAP	0.0149	0.0453		0.104	mg/Kg-dry	1	02/07/2018 15:23	138823
Benzene	NELAP	0.00045	0.0009		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Bromodichloromethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Bromoform	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Bromomethane	NELAP	0.00227	0.0091		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Carbon disulfide	NELAP	0.00272	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Carbon tetrachloride	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Chlorobenzene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Chloroethane	NELAP	0.00181	0.0091		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Chloroform	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Chloromethane	NELAP	0.00181	0.0091		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
cis-1,2-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
cis-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Dibromochloromethane	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Ethylbenzene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
m,p-Xylenes	NELAP	0.00181	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Methyl tert-butyl ether	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Methylene chloride	NELAP	0.00121	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
o-Xylene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Styrene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Tetrachloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Toluene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
trans-1,2-Dichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
trans-1,3-Dichloropropene	NELAP	0.00091	0.0036		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Trichloroethene	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Vinyl acetate	NELAP	0.0181	0.0453		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Vinyl chloride	NELAP	0.00045	0.0018		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Xylenes, Total	NELAP	0.00091	0.0045		ND	mg/Kg-dry	1	02/07/2018 15:23	138823
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		103.4	%REC	1	02/07/2018 15:23	138823
Surr: 4-Bromofluorobenzene	*	0	82.1-116		96.8	%REC	1	02/07/2018 15:23	138823
Surr: Dibromofluoromethane	*	0	77.7-120		98.0	%REC	1	02/07/2018 15:23	138823
Surr: Toluene-d8	*	0	86-116		98.0	%REC	1	02/07/2018 15:23	138823



# CHAIN OF CUSTODY RECORD

*KF 2/5/18  
18020200*

<b>Client Contact</b>	<b>Laboratory</b>	Project Name: <u>IL173 McHenry Co</u>	COC No.: <u>3</u> of <u>4</u>
Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	Lab: <b>TekLab, Inc.</b> Address: <b>5445 Horseshoe Lake Road</b> <b>Collinsville, IL 62234</b> Phone: <b>877-344-1003</b> Contact: <b>Shelly Hennessy</b> email: <b>shennessy@teklabin.com</b>	Project No.: <u>PTA 184-006, DIA AE7-01A</u> TAT: <input type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other	Lab Job No.: <u>18020120</u>
<b>Special Instructions:</b>		<b>Sampler:</b> <u>Ancsha</u> ✓	Sample Temp: <u>7.02 / 3.02</u>

See Table 2 for complete parameter lists and minimum reporting limits.  
 \* If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
 \*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.  
*7.02 taken after samples were laid out on counter.  
 3.02 recorded as samples were packed with 1500019.  
 KF 2/5/18*

ANALYSES											
VOCs	SVOCs	BETX & MTBE	PNAS	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	

**Matrix Key:**  
 W: Water  
 S: Soil  
 SL: Sludge  
 S: Sediment  
 L: Leachate  
 DW: Drinking Water  
 OL: Oil  
 O: Other

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAS	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	Comments
18020120-001	2291V-6-B01	2/1/18	0940	S	X	X					X	X	X	X	X	
-002	2291V-6-B02	2/1/18	0915													
-003	2291V-6-B03	2/1/18	0925													
-004	2291V-6-B04	2/1/18	0935													
-005	2291V-6-B05-1	2/1/18	0945													
-006	2291V-6-B05-2	2/1/18	0950													
-007	2291V-6-B06	2/1/18	1005													
-008	2291V-6-B07	2/1/18	1015													
-009	2291V-6-B07 Dup	2/1/18	1020													
-010	2291V-6-B08	2/1/18	1030													
-011	2291V-6-B09	2/1/18	1035													
-012	2291V-6-B10	2/1/18	1045	↓	↓	↓					↓	↓	↓	↓	↓	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/2/18 0800</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/2/18 10:15</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/5/18 0910</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/5/18 0910</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/5/18 1242</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/5/18 1242</u>

*AN 2/1/18*





# CHAIN OF CUSTODY RECORD

KF 2/15/18 TE  
18020200

<b>Client Contact</b> Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	<b>Laboratory</b> Lab: TekLab, Inc. Address: 5445 Horseshoe Lake Road Collinsville, IL 62234 Phone: 877-344-1003 Contact: Shelly Hennessy email: shennessy@teklabinc.com	Project Name: IL 173 McHenry Co Project No.: PTA 184-006,01A AET-01A TAT: <input checked="" type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: Anesha J.	COC No.: 4 of 4 Lab Job No.: 18020120 Sample Temp:
---	--	--	--

**Special Instructions:**  
 See Table 2 for complete parameter lists and minimum reporting limits.  
 \* If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
 \*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.

ANALYSES												
VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	Cyanide	

**Matrix Key:**  
 W: Water  
 S: Soil  
 SL: Sludge  
 S: Sediment  
 L: Leachate  
 DW: Drinking Water  
 OL: Oil  
 O: Other

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	Cyanide	Comments
18020120-013	2291V-10-B11	2/1/18	1055	S	X	X					X	X	X	X		X	
-014	2291V-10-B12	2/1/18	1100	S	X	X					X	X	X	X		X	
-015	Trip Blank T	2/1/18	1100		X												

Relinquished by: <i>[Signature]</i>	Date/Time: 2/2/18 0900	Received by: <i>[Signature]</i>	Date/Time: 2/2/18 10:15
Relinquished by: <i>[Signature]</i>	Date/Time: 2/5/18 0910	Received by: <i>[Signature]</i>	Date/Time: 2/5/18 0910
Relinquished by: <i>[Signature]</i>	Date/Time: 2-5-18 1242	Received by: <i>[Signature]</i>	Date/Time: 2/5/18 1242

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-145720-3  
Client Project/Site: IDOT - AE7-01

For:  
Andrews Engineering Inc.  
3300 Ginger Creek Drive  
Springfield, Illinois 62711

Attn: Ms. Colleen Grey



Authorized for release by:  
6/5/2018 8:13:23 AM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-3

**Client Sample ID: 2291V-6-B02**

**Lab Sample ID: 500-145720-6**

**Date Collected: 05/18/18 11:30**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 84.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.0013		0.0013	0.00044	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,1,2,2-Tetrachloroethane	<0.0013		0.0013	0.00042	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,1,2-Trichloroethane	<0.0013		0.0013	0.00057	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,1-Dichloroethane	<0.0013		0.0013	0.00045	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,1-Dichloroethene	<0.0013		0.0013	0.00045	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,2-Dichloroethane	<0.0033		0.0033	0.0010	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,2-Dichloropropane	<0.0013		0.0013	0.00034	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
1,3-Dichloropropene, Total	<0.0013		0.0013	0.00046	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
2-Butanone (MEK)	<0.0033		0.0033	0.0015	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
2-Hexanone	<0.0033		0.0033	0.0010	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
4-Methyl-2-pentanone (MIBK)	<0.0033		0.0033	0.00098	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Acetone	<0.013		0.013	0.0058	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Benzene	<0.0013		0.0013	0.00034	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Bromodichloromethane	<0.0013		0.0013	0.00027	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Bromoform	<0.0013		0.0013	0.00039	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Bromomethane	<0.0033		0.0033	0.0012	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Carbon disulfide	<0.0033		0.0033	0.00069	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Carbon tetrachloride	<0.0013		0.0013	0.00038	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Chlorobenzene	<0.0013		0.0013	0.00049	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Chloroethane	<0.0033		0.0033	0.00098	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Chloroform	<0.0013		0.0013	0.00046	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Chloromethane	<0.0033		0.0033	0.0013	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
cis-1,2-Dichloroethene	<0.0013		0.0013	0.00037	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
cis-1,3-Dichloropropene	<0.0013		0.0013	0.00040	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Dibromochloromethane	<0.0013		0.0013	0.00043	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Ethylbenzene	<0.0013		0.0013	0.00063	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Methyl tert-butyl ether	<0.0013		0.0013	0.00039	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Methylene Chloride	<0.0033		0.0033	0.0013	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Styrene	<0.0013		0.0013	0.00040	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Tetrachloroethene	<0.0013		0.0013	0.00045	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Toluene	<0.0013		0.0013	0.00033	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
trans-1,2-Dichloroethene	<0.0013		0.0013	0.00059	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
trans-1,3-Dichloropropene	<0.0013		0.0013	0.00046	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Trichloroethene	<0.0013		0.0013	0.00045	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Vinyl chloride	<0.0013		0.0013	0.00058	mg/Kg		05/19/18 15:15	05/29/18 16:10	1
Xylenes, Total	<0.0026		0.0026	0.00042	mg/Kg		05/19/18 15:15	05/29/18 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	78		70 - 134	05/19/18 15:15	05/29/18 16:10	1
4-Bromofluorobenzene (Surr)	98		75 - 131	05/19/18 15:15	05/29/18 16:10	1
Dibromofluoromethane	83		75 - 126	05/19/18 15:15	05/29/18 16:10	1
Toluene-d8 (Surr)	93		75 - 124	05/19/18 15:15	05/29/18 16:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1

TestAmerica Chicago

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-3

**Client Sample ID: 2291V-6-B02**

**Lab Sample ID: 500-145720-6**

**Date Collected: 05/18/18 11:30**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 84.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2-Methylnaphthalene	<0.077		0.077	0.0070	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Anthracene	<0.038		0.038	0.0064	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Benzo[a]anthracene</b>	<b>0.0095 J</b>		0.038	0.0052	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Benzo[a]pyrene</b>	<b>0.015 J</b>		0.038	0.0074	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Benzo[b]fluoranthene	<0.038		0.038	0.0083	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Benzo[g,h,i]perylene</b>	<b>0.016 J</b>		0.038	0.012	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Benzo[k]fluoranthene</b>	<b>0.022 J</b>		0.038	0.011	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Chrysene</b>	<b>0.016 J</b>		0.038	0.010	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0074	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Fluoranthene</b>	<b>0.019 J</b>		0.038	0.0071	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Fluorene	<0.038		0.038	0.0054	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Hexachlorobenzene	<0.077		0.077	0.0089	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1

TestAmerica Chicago

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-3

**Client Sample ID: 2291V-6-B02**

**Lab Sample ID: 500-145720-6**

**Date Collected: 05/18/18 11:30**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 84.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.013</b>	<b>J</b>	0.038	0.0099	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Phenanthrene	<0.038		0.038	0.0053	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
Phenol	<0.19		0.19	0.085	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1
<b>Pyrene</b>	<b>0.018</b>	<b>J</b>	0.038	0.0076	mg/Kg	☼	05/29/18 07:40	06/01/18 17:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	52		25 - 139	05/29/18 07:40	06/01/18 17:25	1
2-Fluorobiphenyl	95		44 - 121	05/29/18 07:40	06/01/18 17:25	1
2-Fluorophenol	120		46 - 133	05/29/18 07:40	06/01/18 17:25	1
Nitrobenzene-d5	94		41 - 120	05/29/18 07:40	06/01/18 17:25	1
Phenol-d5	61		46 - 125	05/29/18 07:40	06/01/18 17:25	1
Terphenyl-d14	113		35 - 160	05/29/18 07:40	06/01/18 17:25	1

# Definitions/Glossary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-3

## Qualifiers

### GC/MS Semi VOA

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

## Glossary

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

# Accreditation/Certification Summary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-3

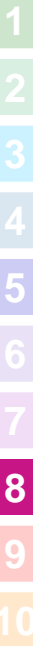
## Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	1,3-Dichloropropene, Total
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids





# CHAIN OF CUSTODY RECORD

<b>Client Contact</b>	<b>Laboratory</b>	Project Name: <u>IL 173, MCHENRY CO</u>	COC No.: <u>1</u> of <u>1</u>
Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	Lab: <b>Test America - Chicago</b> Address: <b>2417 Bond Street</b> <b>University Park, IL 60484</b> Phone: <b>708-534-5200</b> Contact: <b>Dick Wright</b> email: richard.wright@testamericainc.com	Project No.: <u>PTB 184-006/AE7-01A</u> TAT: <input type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: <u>Saeed Khodari</u>	Lab Job No.: <u>500-145720</u> Sample Temp: <u>46</u>

**Special Instructions:**  
See Table 2 for complete parameter lists and minimum reporting limits.  
\* If Total RCRA metal (mg/kg) result exceeds the Soil-Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
\*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.  
\*\*\* If total cyanide exceeds Class I Standard, run ASTM-D3987-(Neutral Leach) cyanide.

**ANALYSES**

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	*** Cyanide	pH	% Solids	Waste Characterization			
6	2291V-6-1302	5-18-18	1130	S	X	X													
7	2291V-6-1305-2	5-18-18	1135	S		X													
3	TRIP BLANK #R	5-18-18			X														

**Matrix Key:**  
W: Water  
S: Soil  
SL: Sludge  
L: Sediment  
L: Leachate  
DW: Drinking Water  
OL: Oil  
O: Other

Relinquished by: <u>[Signature]</u>	Date/Time: <u>5/18/18 - 1300</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5-18-18 1600</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>5-18-18 1820</u>	Received by: <u>[Signature]</u> <b>TACHE</b>	Date/Time: <u>05/18/18 1820</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:





# Illinois Environmental Protection Agency

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

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

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

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

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

### I. Source Location Information

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

Project Name: FAP 303 (IL 173) Office Phone Number, if available: \_\_\_\_\_

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

309 West IL 173

City: Spring Grove State: IL Zip Code: 60081

County: McHenry Township: Burton

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

Latitude: 42.48078 Longitude: -88.20335

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

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

Project Name: FAP 303 (IL 173)

Latitude: 42.48078 Longitude: -88.20335

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and approximately located 35 Ill. Adm. Code 1100.610(a):

LOCATIONS 2291V-8-B01 THROUGH -B03, 2291V-8-B05, -B07, AND -B08 WERE SAMPLED ADJACENT TO SITE 2291V-8. SEE TABLE 3e AND FIGURES 4 AND 6 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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


TEKLAB INC. ANALYTIAL REPORT - WORK ORDER: 18020047

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

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

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

Company Name: Andrews Engineering, Inc.  
 Street Address: 420 Eisenhower Lane North  
 City: Lombard State: IL Zip Code: 60148  
 Phone: 630-953-3332

Savo Radulovic  
 Printed Name:  
  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

June 15, 2018  
 Date:



The following table summarizes the results of laboratory analysis of site soil samples. In reading the table,

- Only parameters reported at concentrations above the most stringent MAC are listed.
- Samples with the notation “**No Contaminants of Concern Noted**” were below the most stringent MAC.

The laboratory report for site soils follows this summary table.

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Volatile Organic Compounds (mg/kg)</b>
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichloropropene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether (MTBE)
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl acetate
Vinyl chloride
Xylenes, total
<b>Semivolatile Organic Compounds (mg/kg)</b>
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Methylphenol
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo(a,h)anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
<b>Inorganic Compounds, Total (mg/kg)</b>
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc
Cyanide
<b>TCLP/SPLP Inorganics (mg/L)</b>
Antimony
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Iron
Lead
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide

ISGS Site 2291V-8  
K.C.'s Cabin

Sample ID	2291V-8-B01	2291V-8-B02	2291V-8-B02 DUP	2291V-8-B03-1	Maximum Allowable Concentration					
Sample Depth (ft)	0-4	0-4	0-4	0-5	1 Most Stringent	2 Outside a Populated Area	3 Within a Populated non-Metropolitan Statistical Area	4 Within Chicago Corporate Limits	5 Within a Metropolitan Statistical Area	
Sample Date	1/31/2018	1/31/2018	1/31/2018	1/31/2018						
PID	0	0	0	0						
Sample pH	8.72	8.09	8.05	8.47						
Matrix	Soil	Soil	Soil	Soil						
<b>Inorganic Compounds, Total (mg/kg)</b>										
Arsenic	8.8	11.8	1.3	10.2	8.49	11.3	--	11.3	--	13
<b>SPLP Metals (mg/L)</b>										
Lead	0.0161	6	0.0084	0.0161	0.0115	m	--	--	--	--
<b>TCLP Metals (mg/L)</b>										
Lead	0.0205	6	ND	ND	ND	m	--	--	--	--

ISGS Site 2291V-8  
K.C.'s Cabin

Sample ID	2291V-8-B03-2	2291V-8-B05	2291V-8-B07	2291V-8-B08	Maximum Allowable Concentration					
Sample Depth (ft)	5-10	0-6	0-7	0-8	1 Most Stringent	2 Outside a Populated Area	3 Within a Populated non-Metropolitan Statistical Area	4 Within Chicago Corporate Limits	5 Within a Metropolitan Statistical Area	
Sample Date	1/31/2018	1/31/2018	1/31/2018	1/31/2018						
PID	0	0	0	0						
Sample pH	8.76	8.04	7.6	7.67						
Matrix	Soil	Soil	Soil	Soil						
<b>Inorganic Compounds, Total (mg/kg)</b>										
Arsenic	4.94	10.7	7.72	9.38	11.3	--	11.3	--	13	
<b>SPLP Metals (mg/L)</b>										
Lead	ND	0.0146	ND	ND	ND	m	--	--	--	--
<b>TCLP Metals (mg/L)</b>										
Lead	NT	ND	NT	NT	NT	m	--	--	--	--

February 22, 2018

Colleen Grey  
Andrews Engineering, Inc.  
3300 Ginger Creek Drive  
Springfield, IL 62711-7233  
TEL: (217) 787-2334  
FAX: (217) 787-9495



**RE:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**WorkOrder:** 18020047

Dear Colleen Grey:

TEKLAB, INC received 11 samples on 2/1/2018 11:50:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Shelly A. Hennessy  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



**Client:** Andrews Engineering, Inc.

**Work Order:** 18020047

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 22-Feb-18

### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

- |  |   |
|--|---|
| # - Unknown hydrocarbon                                      | B - Analyte detected in associated Method Blank |
| E - Value above quantitation range                           | H - Holding times exceeded                      |
| I - Associated internal standard was outside method criteria | J - Analyte detected below quantitation limits  |
| M - Manual Integration used to determine area response       | ND - Not Detected at the Reporting Limit        |
| R - RPD outside accepted recovery limits                     | S - Spike Recovery outside recovery limits      |
| T - TIC(Tentatively identified compound)                     | X - Value exceeds Maximum Contaminant Level     |



## Accreditations

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020047

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 22-Feb-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-001

Client Sample ID: 2291V-8-B01

Matrix: SOLID

Collection Date: 01/31/2018 14:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		19.0	%	1	02/02/2018 16:09	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		81.0	%	1	02/02/2018 16:09	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.29		< 0.29	mg/Kg-dry	1	02/07/2018 15:06	138741
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.72		1	02/02/2018 18:58	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.0665	mg/L	1	02/12/2018 14:39	138849
Lead	NELAP	0.0060	0.0070		0.0205	mg/L	1	02/09/2018 18:27	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 18:44	138712
Barium	NELAP	0.0200	0.0500		0.137	mg/L	1	02/06/2018 18:44	138712
Beryllium	NELAP	0.0003	0.0010	J	0.0005	mg/L	1	02/06/2018 18:44	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 18:44	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 18:44	138712
Chromium	NELAP	0.0040	0.0100		0.0124	mg/L	1	02/06/2018 18:44	138712
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 18:44	138712
Iron	NELAP	0.0070	0.0200	X	9.41	mg/L	1	02/06/2018 18:44	138712
Lead	NELAP	0.0060	0.0070	X	0.0161	mg/L	1	02/06/2018 18:44	138712
Manganese	NELAP	0.0016	0.0050		0.121	mg/L	1	02/06/2018 18:44	138712
Nickel	NELAP	0.0033	0.0100	J	0.0080	mg/L	1	02/06/2018 18:44	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 18:44	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 18:44	138712
Zinc	NELAP	0.0021	0.0100		0.0280	mg/L	1	02/06/2018 18:44	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0004	mg/L	5	02/06/2018 17:00	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 17:00	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 10:57	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.42	4.72		< 4.72	mg/Kg-dry	1	02/05/2018 13:48	138658
Arsenic	NELAP	0.98	2.45		8.80	mg/Kg-dry	1	02/05/2018 19:01	138654
Barium	NELAP	0.10	0.25		227	mg/Kg-dry	1	02/05/2018 19:01	138654
Beryllium	NELAP	0.03	0.05		0.86	mg/Kg-dry	1	02/05/2018 19:01	138654
Boron	NELAP	0.49	1.96		5.54	mg/Kg-dry	1	02/05/2018 19:01	138654
Cadmium	NELAP	0.05	0.20	J	0.17	mg/Kg-dry	1	02/05/2018 19:01	138654
Chromium	NELAP	0.20	0.49	X	22.9	mg/Kg-dry	1	02/05/2018 19:01	138654
Cobalt	NELAP	0.20	0.49		9.68	mg/Kg-dry	1	02/05/2018 19:01	138654
Copper	NELAP	0.15	0.49		17.1	mg/Kg-dry	1	02/05/2018 19:01	138654
Iron	NELAP	0.98	1.96	X	21800	mg/Kg-dry	1	02/05/2018 19:01	138654
Lead	NELAP	0.49	1.47		22.7	mg/Kg-dry	1	02/05/2018 19:01	138654
Magnesium	NELAP	0.39	4.90		5960	mg/Kg-dry	1	02/05/2018 19:01	138654
Manganese	NELAP	0.07	0.29	X	1090	mg/Kg-dry	1	02/05/2018 19:01	138654
Nickel	NELAP	0.20	0.49		20.2	mg/Kg-dry	1	02/05/2018 19:01	138654
Silver	NELAP	0.15	0.49		< 0.49	mg/Kg-dry	1	02/05/2018 19:01	138654

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-001

Client Sample ID: 2291V-8-B01

Matrix: SOLID

Collection Date: 01/31/2018 14:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Thallium	NELAP	1.47	2.55		< 2.55	mg/Kg-dry	1	02/05/2018 19:01	138654
Vanadium	NELAP	0.20	0.98		42.3	mg/Kg-dry	1	02/05/2018 19:01	138654
Zinc	NELAP	0.39	0.98		65.5	mg/Kg-dry	1	02/05/2018 19:01	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.39	0.98		< 0.98	mg/Kg-dry	10	02/06/2018 0:37	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.035	mg/Kg-dry	1	02/06/2018 10:28	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	4.79	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
1,2-Dichlorobenzene	NELAP	5.73	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
1,3-Dichlorobenzene	NELAP	6.05	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
1,4-Dichlorobenzene	NELAP	5.73	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,4,5-Trichlorophenol	NELAP	3.96	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,4,6-Trichlorophenol	NELAP	4.54	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,4-Dichlorophenol	NELAP	4.36	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,4-Dimethylphenol	NELAP	4.58	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,4-Dinitrophenol	NELAP	3.86	36.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,4-Dinitrotoluene	NELAP	3.75	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2,6-Dinitrotoluene	NELAP	3.89	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2-Chloronaphthalene	NELAP	4.32	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2-Chlorophenol	NELAP	4.58	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2-Methylnaphthalene	NELAP	4.29	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2-Nitroaniline	NELAP	5.77	36.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
2-Nitrophenol	NELAP	4.04	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
3,3'-Dichlorobenzidine	NELAP	7.21	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
3-Nitroaniline	NELAP	5.41	36.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4,6-Dinitro-2-methylphenol	NELAP	3.89	36.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4-Bromophenyl phenyl ether	NELAP	3.32	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4-Chloro-3-methylphenol	NELAP	3.96	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4-Chloroaniline	NELAP	5.41	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4-Chlorophenyl phenyl ether	NELAP	3.57	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4-Nitroaniline	NELAP	5.41	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
4-Nitrophenol	NELAP	4.32	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Acenaphthene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Acenaphthylene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Anthracene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Benzo(a)anthracene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Benzo(a)pyrene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Benzo(b)fluoranthene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Benzo(g,h,i)perylene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Benzo(k)fluoranthene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Bis(2-chloroethoxy)methane	NELAP	4.22	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Bis(2-chloroethyl)ether	NELAP	5.12	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Bis(2-chloroisopropyl)ether	NELAP	4.11	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Bis(2-ethylhexyl)phthalate	NELAP	4.22	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Butyl benzyl phthalate	NELAP	3.64	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Carbazole	NELAP	4.40	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-001

Client Sample ID: 2291V-8-B01

Matrix: SOLID

Collection Date: 01/31/2018 14:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chrysene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Dibenzo(a,h)anthracene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Dibenzofuran	NELAP	5.41	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Diethyl phthalate	NELAP	3.46	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Dimethyl phthalate	NELAP	3.28	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Di-n-butyl phthalate	NELAP	3.71	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Di-n-octyl phthalate	NELAP	3.75	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Fluoranthene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Fluorene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Hexachlorobenzene	NELAP	6.02	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Hexachlorobutadiene	NELAP	5.59	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Hexachlorocyclopentadiene	NELAP	3.68	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Hexachloroethane	NELAP	6.02	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Isophorone	NELAP	4.25	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
m,p-Cresol	NELAP	4.54	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Naphthalene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Nitrobenzene	NELAP	4.50	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
N-Nitroso-di-n-propylamine	NELAP	3.96	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
N-Nitrosodiphenylamine	NELAP	3.32	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
o-Cresol	NELAP	4.25	18.0		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Pentachlorophenol	NELAP	23.8	72.1		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Phenanthrene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Phenol	NELAP	4.18	12.6		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Pyrene	NELAP	0.602	1.23		ND	mg/Kg-dry	10	02/07/2018 20:04	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114	S	34.1	%REC	10	02/07/2018 20:04	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		39.3	%REC	10	02/07/2018 20:04	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2	S	32.0	%REC	10	02/07/2018 20:04	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2	S	31.7	%REC	10	02/07/2018 20:04	138762
Surr: Phenol-d5	*	0	38.8-103	S	34.5	%REC	10	02/07/2018 20:04	138762
Surr: p-Terphenyl-d14	*	0	43.2-116	S	42.7	%REC	10	02/07/2018 20:04	138762

Surrogate recovery is outside QC limits due to sample composition.

Elevated reporting limit due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,1,2-Trichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,1-Dichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,1-Dichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,2-Dichloroethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,2-Dichloropropane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
1,3-Dichloropropene, Total	*	0.00085	0.0034		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
2-Butanone	NELAP	0.106	0.170		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
2-Hexanone	NELAP	0.00850	0.0425		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
4-Methyl-2-pentanone	NELAP	0.00850	0.0425		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Acetone	NELAP	0.0140	0.0425	J	0.0404	mg/Kg-dry	1	02/03/2018 6:42	138663
Benzene	NELAP	0.00042	0.0008		0.0018	mg/Kg-dry	1	02/03/2018 6:42	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-001

Client Sample ID: 2291V-8-B01

Matrix: SOLID

Collection Date: 01/31/2018 14:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromodichloromethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Bromoform	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Bromomethane	NELAP	0.00213	0.0085		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Carbon disulfide	NELAP	0.00255	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Carbon tetrachloride	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Chlorobenzene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Chloroethane	NELAP	0.00170	0.0085		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Chloroform	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Chloromethane	NELAP	0.00170	0.0085		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
cis-1,2-Dichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
cis-1,3-Dichloropropene	NELAP	0.00085	0.0034		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Dibromochloromethane	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Ethylbenzene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
m,p-Xylenes	NELAP	0.00170	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Methyl tert-butyl ether	NELAP	0.00042	0.0017		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Methylene chloride	NELAP	0.00113	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
o-Xylene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Styrene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Tetrachloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Toluene	NELAP	0.00085	0.0042	J	0.0027	mg/Kg-dry	1	02/03/2018 6:42	138663
trans-1,2-Dichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
trans-1,3-Dichloropropene	NELAP	0.00085	0.0034		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Trichloroethene	NELAP	0.00085	0.0042		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Vinyl acetate	NELAP	0.0170	0.0425		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Vinyl chloride	NELAP	0.00042	0.0017		ND	mg/Kg-dry	1	02/03/2018 6:42	138663
Xylenes, Total	NELAP	0.00085	0.0042	J	0.0016	mg/Kg-dry	1	02/03/2018 6:42	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.4	%REC	1	02/03/2018 6:42	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		112.4	%REC	1	02/03/2018 6:42	138663
Surr: Dibromofluoromethane	*	0	77.7-120		106.0	%REC	1	02/03/2018 6:42	138663
Surr: Toluene-d8	*	0	86-116		96.7	%REC	1	02/03/2018 6:42	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-002

Client Sample ID: 2291V-8-B02

Matrix: SOLID

Collection Date: 01/31/2018 14:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.5</b>	%	1	02/02/2018 16:09	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.5</b>	%	1	02/02/2018 16:09	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.31	J	<b>0.18</b>	mg/Kg-dry	1	02/07/2018 15:50	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.09</b>		1	02/02/2018 19:01	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.458</b>	mg/L	1	02/12/2018 14:54	138849
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/09/2018 18:31	138849
Manganese	NELAP	0.0016	0.0050		<b>0.0472</b>	mg/L	1	02/09/2018 18:31	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 18:48	138712
Barium	NELAP	0.0200	0.0500		<b>0.130</b>	mg/L	1	02/06/2018 18:48	138712
Beryllium	NELAP	0.0003	0.0010		<b>0.0010</b>	mg/L	1	02/06/2018 18:48	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 18:48	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 18:48	138712
Chromium	NELAP	0.0040	0.0100		<b>0.0218</b>	mg/L	1	02/06/2018 18:48	138712
Cobalt	NELAP	0.0022	0.0100	J	<b>0.0035</b>	mg/L	1	02/06/2018 18:48	138712
Iron	NELAP	0.0070	0.0200	X	<b>17.8</b>	mg/L	1	02/06/2018 18:48	138712
Lead	NELAP	0.0060	0.0070	X	<b>0.0084</b>	mg/L	1	02/06/2018 18:48	138712
Manganese	NELAP	0.0016	0.0050	X	<b>0.291</b>	mg/L	1	02/06/2018 18:48	138712
Nickel	NELAP	0.0033	0.0100		<b>0.0156</b>	mg/L	1	02/06/2018 18:48	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 18:48	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 18:48	138712
Zinc	NELAP	0.0021	0.0100		<b>0.0342</b>	mg/L	1	02/06/2018 18:48	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0004</b>	mg/L	5	02/06/2018 17:08	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 17:08	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 11:06	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.47	4.90		<b>&lt; 4.90</b>	mg/Kg-dry	1	02/05/2018 13:51	138658
Arsenic	NELAP	0.91	2.27	X	<b>11.8</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Barium	NELAP	0.09	0.23		<b>148</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Beryllium	NELAP	0.03	0.05		<b>1.04</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Boron	NELAP	0.45	1.82		<b>6.86</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Cadmium	NELAP	0.05	0.18	J	<b>0.14</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Chromium	NELAP	0.18	0.45	X	<b>28.4</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Cobalt	NELAP	0.18	0.45		<b>11.8</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Copper	NELAP	0.14	0.45		<b>25.1</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Iron	NELAP	0.91	1.82	X	<b>28400</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Lead	NELAP	0.45	1.36		<b>16.7</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Magnesium	NELAP	0.36	4.55		<b>4700</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Manganese	NELAP	0.06	0.27	X	<b>885</b>	mg/Kg-dry	1	02/05/2018 19:05	138654
Nickel	NELAP	0.18	0.45		<b>29.8</b>	mg/Kg-dry	1	02/05/2018 19:05	138654

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-002

Client Sample ID: 2291V-8-B02

Matrix: SOLID

Collection Date: 01/31/2018 14:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.14	0.45		< 0.45	mg/Kg-dry	1	02/05/2018 19:05	138654
Thallium	NELAP	1.36	2.36		< 2.36	mg/Kg-dry	1	02/05/2018 19:05	138654
Vanadium	NELAP	0.18	0.91		53.4	mg/Kg-dry	1	02/05/2018 19:05	138654
Zinc	NELAP	0.36	0.91		60.7	mg/Kg-dry	1	02/05/2018 19:05	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.36	0.91		< 0.91	mg/Kg-dry	10	02/06/2018 0:46	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.041	mg/Kg-dry	1	02/06/2018 10:30	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.166	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
1,2-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
1,3-Dichlorobenzene	NELAP	0.210	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
1,4-Dichlorobenzene	NELAP	0.198	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,4,5-Trichlorophenol	NELAP	0.137	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,4,6-Trichlorophenol	NELAP	0.157	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,4-Dichlorophenol	NELAP	0.151	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,4-Dimethylphenol	NELAP	0.159	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,4-Dinitrophenol	NELAP	0.134	1.25		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,4-Dinitrotoluene	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2,6-Dinitrotoluene	NELAP	0.135	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2-Chloronaphthalene	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2-Chlorophenol	NELAP	0.159	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2-Methylnaphthalene	NELAP	0.149	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2-Nitroaniline	NELAP	0.200	1.25		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
2-Nitrophenol	NELAP	0.140	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
3,3'-Dichlorobenzidine	NELAP	0.250	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
3-Nitroaniline	NELAP	0.187	1.25		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4,6-Dinitro-2-methylphenol	NELAP	0.135	1.25		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4-Bromophenyl phenyl ether	NELAP	0.115	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4-Chloro-3-methylphenol	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4-Chloroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4-Chlorophenyl phenyl ether	NELAP	0.124	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4-Nitroaniline	NELAP	0.187	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
4-Nitrophenol	NELAP	0.150	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Bis(2-chloroethoxy)methane	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Bis(2-chloroethyl)ether	NELAP	0.177	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Bis(2-chloroisopropyl)ether	NELAP	0.142	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.146	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Butyl benzyl phthalate	NELAP	0.126	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762



Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-002

Client Sample ID: 2291V-8-B02

Matrix: SOLID

Collection Date: 01/31/2018 14:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.152	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Dibenzofuran	NELAP	0.187	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Diethyl phthalate	NELAP	0.120	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Dimethyl phthalate	NELAP	0.114	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Di-n-butyl phthalate	NELAP	0.129	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Di-n-octyl phthalate	NELAP	0.130	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Fluoranthene	NELAP	0.021	0.042		0.081	mg/Kg-dry	1	02/07/2018 19:37	138762
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Hexachlorobenzene	NELAP	0.208	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Hexachlorobutadiene	NELAP	0.193	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Hexachlorocyclopentadiene	NELAP	0.127	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Hexachloroethane	NELAP	0.208	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Isophorone	NELAP	0.147	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
m,p-Cresol	NELAP	0.157	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Nitrobenzene	NELAP	0.156	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
N-Nitroso-di-n-propylamine	NELAP	0.137	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
N-Nitrosodiphenylamine	NELAP	0.115	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
o-Cresol	NELAP	0.147	0.624		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Pentachlorophenol	NELAP	0.824	2.50		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Phenanthrene	NELAP	0.021	0.042		0.081	mg/Kg-dry	1	02/07/2018 19:37	138762
Phenol	NELAP	0.145	0.437		ND	mg/Kg-dry	1	02/07/2018 19:37	138762
Pyrene	NELAP	0.021	0.042		0.054	mg/Kg-dry	1	02/07/2018 19:37	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		66.5	%REC	1	02/07/2018 19:37	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		58.4	%REC	1	02/07/2018 19:37	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		62.6	%REC	1	02/07/2018 19:37	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		54.9	%REC	1	02/07/2018 19:37	138762
Surr: Phenol-d5	*	0	38.8-103		61.0	%REC	1	02/07/2018 19:37	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		65.3	%REC	1	02/07/2018 19:37	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,1,2-Trichloroethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,1-Dichloroethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,1-Dichloroethene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,2-Dichloroethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,2-Dichloropropane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
1,3-Dichloropropene, Total	*	0.00117	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
2-Butanone	NELAP	0.146	0.233		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
2-Hexanone	NELAP	0.0117	0.0583		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
4-Methyl-2-pentanone	NELAP	0.0117	0.0583		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Acetone	NELAP	0.0193	0.0583		0.0651	mg/Kg-dry	1	02/03/2018 7:08	138663
Benzene	NELAP	0.00058	0.0012		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Bromodichloromethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-002

Client Sample ID: 2291V-8-B02

Matrix: SOLID

Collection Date: 01/31/2018 14:20

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Bromomethane	NELAP	0.00292	0.0117		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Carbon disulfide	NELAP	0.00350	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Carbon tetrachloride	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Chlorobenzene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Chloroethane	NELAP	0.00233	0.0117		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Chloroform	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Chloromethane	NELAP	0.00233	0.0117		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
cis-1,2-Dichloroethene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
cis-1,3-Dichloropropene	NELAP	0.00117	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Dibromochloromethane	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Ethylbenzene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
m,p-Xylenes	NELAP	0.00233	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Methyl tert-butyl ether	NELAP	0.00058	0.0023		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Methylene chloride	NELAP	0.00155	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
o-Xylene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Styrene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Tetrachloroethene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Toluene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
trans-1,2-Dichloroethene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
trans-1,3-Dichloropropene	NELAP	0.00117	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Trichloroethene	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Vinyl acetate	NELAP	0.0233	0.0583		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Vinyl chloride	NELAP	0.00058	0.0023		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Xylenes, Total	NELAP	0.00117	0.0058		ND	mg/Kg-dry	1	02/03/2018 7:08	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>115.4</b>	%REC	1	02/03/2018 7:08	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>101.3</b>	%REC	1	02/03/2018 7:08	138663
Surr: Dibromofluoromethane	*	0	77.7-120		<b>106.2</b>	%REC	1	02/03/2018 7:08	138663
Surr: Toluene-d8	*	0	86-116		<b>94.5</b>	%REC	1	02/03/2018 7:08	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-003

Client Sample ID: 2291V-8-B02 DUP

Matrix: SOLID

Collection Date: 01/31/2018 14:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		21.3	%	1	02/02/2018 16:09	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		78.7	%	1	02/02/2018 16:09	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.29	J	0.18	mg/Kg-dry	1	02/07/2018 15:54	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.05		1	02/02/2018 19:03	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.320	mg/L	1	02/12/2018 14:58	138849
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/09/2018 18:34	138849
Manganese	NELAP	0.0016	0.0050		0.0372	mg/L	1	02/09/2018 18:34	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	0.0128	mg/L	1	02/06/2018 18:52	138712
Barium	NELAP	0.0200	0.0500		0.236	mg/L	1	02/06/2018 18:52	138712
Beryllium	NELAP	0.0003	0.0010		0.0014	mg/L	1	02/06/2018 18:52	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 18:52	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 18:52	138712
Chromium	NELAP	0.0040	0.0100		0.0372	mg/L	1	02/06/2018 18:52	138712
Cobalt	NELAP	0.0022	0.0100	J	0.0077	mg/L	1	02/06/2018 18:52	138712
Iron	NELAP	0.0070	0.0200	X	32.7	mg/L	1	02/06/2018 18:52	138712
Lead	NELAP	0.0060	0.0070	X	0.0161	mg/L	1	02/06/2018 18:52	138712
Manganese	NELAP	0.0016	0.0050	X	0.568	mg/L	1	02/06/2018 18:52	138712
Nickel	NELAP	0.0033	0.0100		0.0257	mg/L	1	02/06/2018 18:52	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 18:52	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 18:52	138712
Zinc	NELAP	0.0021	0.0100		0.0858	mg/L	1	02/06/2018 18:52	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	0.0006	mg/L	5	02/06/2018 17:16	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 17:16	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 11:09	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.42	4.72		< 4.72	mg/Kg-dry	1	02/05/2018 14:02	138658
Arsenic	NELAP	0.96	2.40		10.2	mg/Kg-dry	1	02/05/2018 19:08	138654
Barium	NELAP	0.10	0.24		117	mg/Kg-dry	1	02/05/2018 19:08	138654
Beryllium	NELAP	0.03	0.05		0.84	mg/Kg-dry	1	02/05/2018 19:08	138654
Boron	NELAP	0.48	1.92		6.45	mg/Kg-dry	1	02/05/2018 19:08	138654
Cadmium	NELAP	0.05	0.19		0.21	mg/Kg-dry	1	02/05/2018 19:08	138654
Chromium	NELAP	0.19	0.48	X	25.4	mg/Kg-dry	1	02/05/2018 19:08	138654
Cobalt	NELAP	0.19	0.48		10.8	mg/Kg-dry	1	02/05/2018 19:08	138654
Copper	NELAP	0.14	0.48		18.3	mg/Kg-dry	1	02/05/2018 19:08	138654
Iron	NELAP	0.96	1.92	X	25000	mg/Kg-dry	1	02/05/2018 19:08	138654
Lead	NELAP	0.48	1.44		16.8	mg/Kg-dry	1	02/05/2018 19:08	138654
Magnesium	NELAP	0.38	4.81		3690	mg/Kg-dry	1	02/05/2018 19:08	138654
Manganese	NELAP	0.07	0.29	X	812	mg/Kg-dry	1	02/05/2018 19:08	138654
Nickel	NELAP	0.19	0.48		23.3	mg/Kg-dry	1	02/05/2018 19:08	138654

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Matrix: SOLID

Collection Date: 01/31/2018 14:25

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.14	0.48		< 0.48	mg/Kg-dry	1	02/05/2018 19:08	138654
Thallium	NELAP	1.44	2.50		< 2.50	mg/Kg-dry	1	02/05/2018 19:08	138654
Vanadium	NELAP	0.19	0.96		48.4	mg/Kg-dry	1	02/05/2018 19:08	138654
Zinc	NELAP	0.38	0.96		62.8	mg/Kg-dry	1	02/05/2018 19:08	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.96		< 0.96	mg/Kg-dry	10	02/06/2018 0:54	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.047	mg/Kg-dry	1	02/06/2018 10:33	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.161	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
1,2-Dichlorobenzene	NELAP	0.192	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
1,3-Dichlorobenzene	NELAP	0.203	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
1,4-Dichlorobenzene	NELAP	0.192	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,4,5-Trichlorophenol	NELAP	0.133	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,4,6-Trichlorophenol	NELAP	0.152	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,4-Dichlorophenol	NELAP	0.146	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,4-Dimethylphenol	NELAP	0.154	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,4-Dinitrophenol	NELAP	0.129	1.21		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,4-Dinitrotoluene	NELAP	0.126	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2,6-Dinitrotoluene	NELAP	0.131	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2-Chloronaphthalene	NELAP	0.145	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2-Chlorophenol	NELAP	0.154	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2-Methylnaphthalene	NELAP	0.144	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2-Nitroaniline	NELAP	0.194	1.21		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
2-Nitrophenol	NELAP	0.135	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
3,3'-Dichlorobenzidine	NELAP	0.242	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
3-Nitroaniline	NELAP	0.181	1.21		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4,6-Dinitro-2-methylphenol	NELAP	0.131	1.21		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4-Bromophenyl phenyl ether	NELAP	0.111	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4-Chloro-3-methylphenol	NELAP	0.133	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4-Chloroaniline	NELAP	0.181	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4-Chlorophenyl phenyl ether	NELAP	0.120	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4-Nitroaniline	NELAP	0.181	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
4-Nitrophenol	NELAP	0.145	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Bis(2-chloroethoxy)methane	NELAP	0.142	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Bis(2-chloroethyl)ether	NELAP	0.172	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Bis(2-chloroisopropyl)ether	NELAP	0.138	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.142	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Butyl benzyl phthalate	NELAP	0.122	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762



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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.148	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Dibenzofuran	NELAP	0.181	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Diethyl phthalate	NELAP	0.116	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Dimethyl phthalate	NELAP	0.110	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Di-n-butyl phthalate	NELAP	0.125	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Di-n-octyl phthalate	NELAP	0.126	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Hexachlorobenzene	NELAP	0.202	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Hexachlorobutadiene	NELAP	0.188	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Hexachlorocyclopentadiene	NELAP	0.123	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Hexachloroethane	NELAP	0.202	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Isophorone	NELAP	0.143	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
m,p-Cresol	NELAP	0.152	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Nitrobenzene	NELAP	0.151	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
N-Nitroso-di-n-propylamine	NELAP	0.133	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
N-Nitrosodiphenylamine	NELAP	0.111	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
o-Cresol	NELAP	0.143	0.605		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Pentachlorophenol	NELAP	0.798	2.42		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Phenol	NELAP	0.140	0.423		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 11:42	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		43.6	%REC	1	02/07/2018 11:42	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		39.3	%REC	1	02/07/2018 11:42	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		36.4	%REC	1	02/07/2018 11:42	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2	S	35.9	%REC	1	02/07/2018 11:42	138762
Surr: Phenol-d5	*	0	38.8-103	S	38.0	%REC	1	02/07/2018 11:42	138762
Surr: p-Terphenyl-d14	*	0	43.2-116	S	42.1	%REC	1	02/07/2018 11:42	138762

Surrogate recovery is outside QC limits due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,1,2-Trichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,1-Dichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,1-Dichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,2-Dichloroethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,2-Dichloropropane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
1,3-Dichloropropene, Total	*	0.00094	0.0038		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
2-Butanone	NELAP	0.118	0.189		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
2-Hexanone	NELAP	0.00943	0.0471		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
4-Methyl-2-pentanone	NELAP	0.00943	0.0471		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Acetone	NELAP	0.0156	0.0471		0.137	mg/Kg-dry	1	02/03/2018 7:35	138663
Benzene	NELAP	0.00047	0.0009	J	0.0006	mg/Kg-dry	1	02/03/2018 7:35	138663



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<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromodichloromethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Bromoform	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Bromomethane	NELAP	0.00236	0.0094		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Carbon disulfide	NELAP	0.00283	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Carbon tetrachloride	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Chlorobenzene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Chloroethane	NELAP	0.00189	0.0094		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Chloroform	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Chloromethane	NELAP	0.00189	0.0094		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
cis-1,2-Dichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
cis-1,3-Dichloropropene	NELAP	0.00094	0.0038		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Dibromochloromethane	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Ethylbenzene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
m,p-Xylenes	NELAP	0.00189	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Methyl tert-butyl ether	NELAP	0.00047	0.0019		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Methylene chloride	NELAP	0.00125	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
o-Xylene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Styrene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Tetrachloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Toluene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
trans-1,2-Dichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
trans-1,3-Dichloropropene	NELAP	0.00094	0.0038		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Trichloroethene	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Vinyl acetate	NELAP	0.0189	0.0471		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Vinyl chloride	NELAP	0.00047	0.0019		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Xylenes, Total	NELAP	0.00094	0.0047		ND	mg/Kg-dry	1	02/03/2018 7:35	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		115.7	%REC	1	02/03/2018 7:35	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		103.1	%REC	1	02/03/2018 7:35	138663
Surr: Dibromofluoromethane	*	0	77.7-120		105.6	%REC	1	02/03/2018 7:35	138663
Surr: Toluene-d8	*	0	86-116		95.4	%REC	1	02/03/2018 7:35	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



## Laboratory Results

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Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-004

Client Sample ID: 2291V-8-B03-1

Matrix: SOLID

Collection Date: 01/31/2018 14:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>18.1</b>	%	1	02/02/2018 16:10	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>81.9</b>	%	1	02/02/2018 16:10	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.26	J	<b>0.19</b>	mg/Kg-dry	1	02/07/2018 16:20	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.47</b>		1	02/02/2018 19:05	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.515</b>	mg/L	1	02/12/2018 15:02	138849
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/09/2018 18:38	138849
Manganese	NELAP	0.0016	0.0050		<b>0.0213</b>	mg/L	1	02/09/2018 18:38	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	<b>0.0111</b>	mg/L	1	02/06/2018 18:59	138712
Barium	NELAP	0.0200	0.0500		<b>0.237</b>	mg/L	1	02/06/2018 18:59	138712
Beryllium	NELAP	0.0003	0.0010		<b>0.0011</b>	mg/L	1	02/06/2018 18:59	138712
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 18:59	138712
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 18:59	138712
Chromium	NELAP	0.0040	0.0100		<b>0.0256</b>	mg/L	1	02/06/2018 18:59	138712
Cobalt	NELAP	0.0022	0.0100	J	<b>0.0043</b>	mg/L	1	02/06/2018 18:59	138712
Iron	NELAP	0.0070	0.0200	X	<b>23.4</b>	mg/L	1	02/06/2018 18:59	138712
Lead	NELAP	0.0060	0.0070	X	<b>0.0115</b>	mg/L	1	02/06/2018 18:59	138712
Manganese	NELAP	0.0016	0.0050	X	<b>0.370</b>	mg/L	1	02/06/2018 18:59	138712
Nickel	NELAP	0.0033	0.0100		<b>0.0158</b>	mg/L	1	02/06/2018 18:59	138712
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 18:59	138712
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 18:59	138712
Zinc	NELAP	0.0021	0.0100		<b>0.0467</b>	mg/L	1	02/06/2018 18:59	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0004</b>	mg/L	5	02/06/2018 17:24	138714
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 17:24	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 11:11	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		<b>&lt; 4.63</b>	mg/Kg-dry	1	02/05/2018 14:17	138658
Arsenic	NELAP	1.00	2.50		<b>8.49</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Barium	NELAP	0.10	0.25		<b>153</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Beryllium	NELAP	0.03	0.05		<b>0.78</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Boron	NELAP	0.50	2.00		<b>3.88</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Cadmium	NELAP	0.05	0.20	J	<b>0.11</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Chromium	NELAP	0.20	0.50	X	<b>21.1</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Cobalt	NELAP	0.20	0.50		<b>12.2</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Copper	NELAP	0.15	0.50		<b>12.8</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Iron	NELAP	1.00	2.00	X	<b>20200</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Lead	NELAP	0.50	1.50		<b>13.7</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Magnesium	NELAP	0.40	5.00		<b>3180</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Manganese	NELAP	0.07	0.30	X	<b>1030</b>	mg/Kg-dry	1	02/05/2018 19:12	138654
Nickel	NELAP	0.20	0.50		<b>18.6</b>	mg/Kg-dry	1	02/05/2018 19:12	138654

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-004

Client Sample ID: 2291V-8-B03-1

Matrix: SOLID

Collection Date: 01/31/2018 14:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.15	0.50		< 0.50	mg/Kg-dry	1	02/05/2018 19:12	138654
Thallium	NELAP	1.50	2.60		< 2.60	mg/Kg-dry	1	02/05/2018 19:12	138654
Vanadium	NELAP	0.20	1.00		39.6	mg/Kg-dry	1	02/05/2018 19:12	138654
Zinc	NELAP	0.40	1.00		47.1	mg/Kg-dry	1	02/05/2018 19:12	138654
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00		< 1.00	mg/Kg-dry	10	02/06/2018 1:27	138655
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.020	mg/Kg-dry	1	02/06/2018 10:39	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.161	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
1,2-Dichlorobenzene	NELAP	0.192	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
1,3-Dichlorobenzene	NELAP	0.203	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
1,4-Dichlorobenzene	NELAP	0.192	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,4,5-Trichlorophenol	NELAP	0.133	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,4,6-Trichlorophenol	NELAP	0.153	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,4-Dichlorophenol	NELAP	0.146	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,4-Dimethylphenol	NELAP	0.154	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,4-Dinitrophenol	NELAP	0.130	1.21		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,4-Dinitrotoluene	NELAP	0.126	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2,6-Dinitrotoluene	NELAP	0.131	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2-Chloronaphthalene	NELAP	0.145	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2-Chlorophenol	NELAP	0.154	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2-Methylnaphthalene	NELAP	0.144	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2-Nitroaniline	NELAP	0.194	1.21		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
2-Nitrophenol	NELAP	0.136	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
3,3'-Dichlorobenzidine	NELAP	0.242	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
3-Nitroaniline	NELAP	0.182	1.21		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4,6-Dinitro-2-methylphenol	NELAP	0.131	1.21		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4-Bromophenyl phenyl ether	NELAP	0.111	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4-Chloro-3-methylphenol	NELAP	0.133	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4-Chloroaniline	NELAP	0.182	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4-Chlorophenyl phenyl ether	NELAP	0.120	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4-Nitroaniline	NELAP	0.182	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
4-Nitrophenol	NELAP	0.145	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Acenaphthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Acenaphthylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Benzo(a)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Benzo(a)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Benzo(b)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Benzo(g,h,i)perylene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Benzo(k)fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Bis(2-chloroethoxy)methane	NELAP	0.142	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Bis(2-chloroethyl)ether	NELAP	0.172	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Bis(2-chloroisopropyl)ether	NELAP	0.138	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.142	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Butyl benzyl phthalate	NELAP	0.122	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762



Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

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Matrix: SOLID

Collection Date: 01/31/2018 14:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.148	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Chrysene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Dibenzo(a,h)anthracene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Dibenzofuran	NELAP	0.182	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Diethyl phthalate	NELAP	0.116	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Dimethyl phthalate	NELAP	0.110	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Di-n-butyl phthalate	NELAP	0.125	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Di-n-octyl phthalate	NELAP	0.126	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Fluoranthene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Fluorene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Hexachlorobenzene	NELAP	0.202	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Hexachlorobutadiene	NELAP	0.188	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Hexachlorocyclopentadiene	NELAP	0.123	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Hexachloroethane	NELAP	0.202	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Isophorone	NELAP	0.143	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
m,p-Cresol	NELAP	0.153	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Naphthalene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Nitrobenzene	NELAP	0.151	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
N-Nitroso-di-n-propylamine	NELAP	0.133	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
N-Nitrosodiphenylamine	NELAP	0.111	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
o-Cresol	NELAP	0.143	0.605		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Pentachlorophenol	NELAP	0.799	2.42		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Phenanthrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Phenol	NELAP	0.140	0.424		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Pyrene	NELAP	0.020	0.041		ND	mg/Kg-dry	1	02/07/2018 12:38	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		65.7	%REC	1	02/07/2018 12:38	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		61.2	%REC	1	02/07/2018 12:38	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		55.0	%REC	1	02/07/2018 12:38	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		53.5	%REC	1	02/07/2018 12:38	138762
Surr: Phenol-d5	*	0	38.8-103		56.8	%REC	1	02/07/2018 12:38	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		69.7	%REC	1	02/07/2018 12:38	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,1,2-Trichloroethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,1-Dichloroethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,1-Dichloroethene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,2-Dichloroethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,2-Dichloropropane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
1,3-Dichloropropene, Total	*	0.00185	0.0074		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
2-Butanone	NELAP	0.231	0.370		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
2-Hexanone	NELAP	0.0185	0.0925		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
4-Methyl-2-pentanone	NELAP	0.0185	0.0925		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Acetone	NELAP	0.0305	0.0925		0.191	mg/Kg-dry	1	02/03/2018 8:01	138663
Benzene	NELAP	0.00092	0.0018		0.0027	mg/Kg-dry	1	02/03/2018 8:01	138663
Bromodichloromethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-004

Client Sample ID: 2291V-8-B03-1

Matrix: SOLID

Collection Date: 01/31/2018 14:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Bromomethane	NELAP	0.00463	0.0185		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Carbon disulfide	NELAP	0.00555	0.0092	J	0.0077	mg/Kg-dry	1	02/03/2018 8:01	138663
Carbon tetrachloride	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Chlorobenzene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Chloroethane	NELAP	0.00370	0.0185		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Chloroform	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Chloromethane	NELAP	0.00370	0.0185		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
cis-1,2-Dichloroethene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
cis-1,3-Dichloropropene	NELAP	0.00185	0.0074		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Dibromochloromethane	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Ethylbenzene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
m,p-Xylenes	NELAP	0.00370	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Methyl tert-butyl ether	NELAP	0.00092	0.0037		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Methylene chloride	NELAP	0.00246	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
o-Xylene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Styrene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Tetrachloroethene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Toluene	NELAP	0.00185	0.0092	J	0.0043	mg/Kg-dry	1	02/03/2018 8:01	138663
trans-1,2-Dichloroethene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
trans-1,3-Dichloropropene	NELAP	0.00185	0.0074		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Trichloroethene	NELAP	0.00185	0.0092		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Vinyl acetate	NELAP	0.0370	0.0925		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Vinyl chloride	NELAP	0.00092	0.0037		ND	mg/Kg-dry	1	02/03/2018 8:01	138663
Xylenes, Total	NELAP	0.00185	0.0092	J	0.0020	mg/Kg-dry	1	02/03/2018 8:01	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		118.4	%REC	1	02/03/2018 8:01	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		107.0	%REC	1	02/03/2018 8:01	138663
Surr: Dibromofluoromethane	*	0	77.7-120		107.1	%REC	1	02/03/2018 8:01	138663
Surr: Toluene-d8	*	0	86-116		99.1	%REC	1	02/03/2018 8:01	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-005

Client Sample ID: 2291V-8-B03-2

Matrix: SOLID

Collection Date: 01/31/2018 14:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		4.0	%	1	02/02/2018 16:10	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		96.0	%	1	02/02/2018 16:10	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.10	0.25		< 0.25	mg/Kg-dry	1	02/07/2018 16:25	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		8.76		1	02/02/2018 19:10	R243064
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 19:03	138712
Barium	NELAP	0.0200	0.0500	J	0.0234	mg/L	1	02/06/2018 19:03	138712
Beryllium	NELAP	0.0003	0.0010		< 0.0010	mg/L	1	02/06/2018 19:03	138712
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 19:03	138712
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 19:03	138712
Chromium	NELAP	0.0040	0.0100		< 0.0100	mg/L	1	02/06/2018 19:03	138712
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 19:03	138712
Iron	NELAP	0.0070	0.0200		0.0226	mg/L	1	02/07/2018 12:49	138712
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/06/2018 19:03	138712
Manganese	NELAP	0.0016	0.0050		< 0.0050	mg/L	1	02/06/2018 19:03	138712
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/06/2018 19:03	138712
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 19:03	138712
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 19:03	138712
Zinc	NELAP	0.0021	0.0100		< 0.0100	mg/L	1	02/06/2018 19:03	138712
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	02/06/2018 17:32	138714
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 17:32	138714
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 11:13	138710
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63		< 4.63	mg/Kg-dry	1	02/05/2018 14:21	138658
Arsenic	NELAP	1.00	2.50		4.94	mg/Kg-dry	1	02/05/2018 21:14	138656
Barium	NELAP	0.10	0.25		15.3	mg/Kg-dry	1	02/05/2018 21:14	138656
Beryllium	NELAP	0.03	0.05		0.15	mg/Kg-dry	1	02/05/2018 21:14	138656
Boron	NELAP	0.50	2.00		4.90	mg/Kg-dry	1	02/05/2018 21:14	138656
Cadmium	NELAP	0.05	0.20	J	0.06	mg/Kg-dry	1	02/05/2018 21:14	138656
Chromium	NELAP	0.20	0.50		5.15	mg/Kg-dry	1	02/05/2018 21:14	138656
Cobalt	NELAP	0.20	0.50		2.55	mg/Kg-dry	1	02/05/2018 21:14	138656
Copper	NELAP	0.15	0.50		19.6	mg/Kg-dry	1	02/05/2018 21:14	138656
Iron	NELAP	1.00	2.00		10600	mg/Kg-dry	1	02/05/2018 21:14	138656
Lead	NELAP	0.50	1.50		4.71	mg/Kg-dry	1	02/05/2018 21:14	138656
Magnesium	NELAP	0.40	5.00		79100	mg/Kg-dry	1	02/05/2018 21:14	138656
Manganese	NELAP	0.07	0.30		342	mg/Kg-dry	1	02/05/2018 21:14	138656
Nickel	NELAP	0.20	0.50		7.03	mg/Kg-dry	1	02/05/2018 21:14	138656
Silver	NELAP	0.15	0.50		< 0.50	mg/Kg-dry	1	02/05/2018 21:14	138656
Thallium	NELAP	1.50	2.60	J	2.10	mg/Kg-dry	1	02/05/2018 21:14	138656
Vanadium	NELAP	0.20	1.00		13.8	mg/Kg-dry	1	02/05/2018 21:14	138656
Zinc	NELAP	0.40	1.00		24.4	mg/Kg-dry	1	02/05/2018 21:14	138656

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-005

Client Sample ID: 2291V-8-B03-2

Matrix: SOLID

Collection Date: 01/31/2018 14:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00		< 1.00	mg/Kg-dry	10	02/06/2018 3:30	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.010	J	0.008	mg/Kg-dry	1	02/06/2018 10:42	138637
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.138	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
1,2-Dichlorobenzene	NELAP	0.165	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
1,3-Dichlorobenzene	NELAP	0.174	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
1,4-Dichlorobenzene	NELAP	0.165	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,4,5-Trichlorophenol	NELAP	0.114	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,4,6-Trichlorophenol	NELAP	0.131	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,4-Dichlorophenol	NELAP	0.126	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,4-Dimethylphenol	NELAP	0.132	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,4-Dinitrophenol	NELAP	0.111	1.04		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,4-Dinitrotoluene	NELAP	0.108	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2,6-Dinitrotoluene	NELAP	0.112	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2-Chloronaphthalene	NELAP	0.125	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2-Chlorophenol	NELAP	0.132	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2-Methylnaphthalene	NELAP	0.123	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2-Nitroaniline	NELAP	0.166	1.04		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
2-Nitrophenol	NELAP	0.116	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
3,3'-Dichlorobenzidine	NELAP	0.208	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
3-Nitroaniline	NELAP	0.156	1.04		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4,6-Dinitro-2-methylphenol	NELAP	0.112	1.04		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4-Bromophenyl phenyl ether	NELAP	0.095	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4-Chloro-3-methylphenol	NELAP	0.114	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4-Chloroaniline	NELAP	0.156	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4-Chlorophenyl phenyl ether	NELAP	0.103	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4-Nitroaniline	NELAP	0.156	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
4-Nitrophenol	NELAP	0.125	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Acenaphthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Acenaphthylene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Benzo(a)anthracene	NELAP	0.017	0.035	J	0.018	mg/Kg-dry	1	02/07/2018 13:06	138762
Benzo(a)pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Benzo(b)fluoranthene	NELAP	0.017	0.035	J	0.019	mg/Kg-dry	1	02/07/2018 13:06	138762
Benzo(g,h,i)perylene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Benzo(k)fluoranthene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Bis(2-chloroethoxy)methane	NELAP	0.121	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Bis(2-chloroethyl)ether	NELAP	0.147	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Bis(2-chloroisopropyl)ether	NELAP	0.118	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.121	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Butyl benzyl phthalate	NELAP	0.105	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Carbazole	NELAP	0.127	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Chrysene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Dibenzo(a,h)anthracene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Dibenzofuran	NELAP	0.156	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Diethyl phthalate	NELAP	0.100	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-005

Client Sample ID: 2291V-8-B03-2

Matrix: SOLID

Collection Date: 01/31/2018 14:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dimethyl phthalate	NELAP	0.094	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Di-n-butyl phthalate	NELAP	0.107	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Di-n-octyl phthalate	NELAP	0.108	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Fluoranthene	NELAP	0.017	0.035	J	0.030	mg/Kg-dry	1	02/07/2018 13:06	138762
Fluorene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Hexachlorobenzene	NELAP	0.173	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Hexachlorobutadiene	NELAP	0.161	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Hexachlorocyclopentadiene	NELAP	0.106	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Hexachloroethane	NELAP	0.173	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Isophorone	NELAP	0.122	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
m,p-Cresol	NELAP	0.131	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Naphthalene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Nitrobenzene	NELAP	0.130	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
N-Nitroso-di-n-propylamine	NELAP	0.114	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
N-Nitrosodiphenylamine	NELAP	0.095	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
o-Cresol	NELAP	0.122	0.519		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Pentachlorophenol	NELAP	0.685	2.08		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Phenanthrene	NELAP	0.017	0.035		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Phenol	NELAP	0.120	0.363		ND	mg/Kg-dry	1	02/07/2018 13:06	138762
Pyrene	NELAP	0.017	0.035	J	0.023	mg/Kg-dry	1	02/07/2018 13:06	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		47.2	%REC	1	02/07/2018 13:06	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		43.3	%REC	1	02/07/2018 13:06	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		38.1	%REC	1	02/07/2018 13:06	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		36.6	%REC	1	02/07/2018 13:06	138762
Surr: Phenol-d5	*	0	38.8-103	S	38.1	%REC	1	02/07/2018 13:06	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		48.2	%REC	1	02/07/2018 13:06	138762

Surrogate recovery is outside QC limits due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,1,2-Trichloroethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,1-Dichloroethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,1-Dichloroethene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,2-Dichloroethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,2-Dichloropropane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
1,3-Dichloropropene, Total	*	0.00080	0.0032		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
2-Butanone	NELAP	0.100	0.161		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
2-Hexanone	NELAP	0.00803	0.0402		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
4-Methyl-2-pentanone	NELAP	0.00803	0.0402		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Acetone	NELAP	0.0133	0.0402	J	0.0143	mg/Kg-dry	1	02/03/2018 8:27	138663
Benzene	NELAP	0.00040	0.0008		0.0024	mg/Kg-dry	1	02/03/2018 8:27	138663
Bromodichloromethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Bromoform	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Bromomethane	NELAP	0.00201	0.0080		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Carbon disulfide	NELAP	0.00241	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Carbon tetrachloride	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-005

Client Sample ID: 2291V-8-B03-2

Matrix: SOLID

Collection Date: 01/31/2018 14:55

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chlorobenzene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Chloroethane	NELAP	0.00161	0.0080		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Chloroform	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Chloromethane	NELAP	0.00161	0.0080		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
cis-1,2-Dichloroethene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
cis-1,3-Dichloropropene	NELAP	0.00080	0.0032		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Dibromochloromethane	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Ethylbenzene	NELAP	0.00080	0.0040	J	0.0017	mg/Kg-dry	1	02/03/2018 8:27	138663
m,p-Xylenes	NELAP	0.00161	0.0040	J	0.0024	mg/Kg-dry	1	02/03/2018 8:27	138663
Methyl tert-butyl ether	NELAP	0.00040	0.0016		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Methylene chloride	NELAP	0.00107	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
o-Xylene	NELAP	0.00080	0.0040	J	0.0010	mg/Kg-dry	1	02/03/2018 8:27	138663
Styrene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Tetrachloroethene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Toluene	NELAP	0.00080	0.0040		0.0058	mg/Kg-dry	1	02/03/2018 8:27	138663
trans-1,2-Dichloroethene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
trans-1,3-Dichloropropene	NELAP	0.00080	0.0032		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Trichloroethene	NELAP	0.00080	0.0040		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Vinyl acetate	NELAP	0.0161	0.0402		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Vinyl chloride	NELAP	0.00040	0.0016		ND	mg/Kg-dry	1	02/03/2018 8:27	138663
Xylenes, Total	NELAP	0.00080	0.0040	J	0.0034	mg/Kg-dry	1	02/03/2018 8:27	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		113.2	%REC	1	02/03/2018 8:27	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		97.5	%REC	1	02/03/2018 8:27	138663
Surr: Dibromofluoromethane	*	0	77.7-120		105.1	%REC	1	02/03/2018 8:27	138663
Surr: Toluene-d8	*	0	86-116		94.0	%REC	1	02/03/2018 8:27	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-007

Client Sample ID: 2291V-8-B05

Matrix: SOLID

Collection Date: 01/31/2018 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>20.3</b>	%	1	02/02/2018 16:10	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.7</b>	%	1	02/02/2018 16:10	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.11	0.27		<b>&lt; 0.27</b>	mg/Kg-dry	1	02/07/2018 16:38	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.04</b>		1	02/02/2018 19:19	R243064
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.0708</b>	mg/L	1	02/12/2018 15:05	138849
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/09/2018 18:49	138849
Manganese	NELAP	0.0016	0.0050		<b>0.0510</b>	mg/L	1	02/09/2018 18:49	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	<b>0.0143</b>	mg/L	1	02/06/2018 19:36	138715
Barium	NELAP	0.0200	0.0500		<b>0.276</b>	mg/L	1	02/06/2018 19:36	138715
Beryllium	NELAP	0.0003	0.0010		<b>0.0016</b>	mg/L	1	02/06/2018 19:36	138715
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 19:36	138715
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 19:36	138715
Chromium	NELAP	0.0040	0.0100		<b>0.0397</b>	mg/L	1	02/06/2018 19:36	138715
Cobalt	NELAP	0.0022	0.0100	J	<b>0.0077</b>	mg/L	1	02/06/2018 19:36	138715
Iron	NELAP	0.0070	0.0200	X	<b>38.5</b>	mg/L	1	02/06/2018 19:36	138715
Lead	NELAP	0.0060	0.0070	X	<b>0.0146</b>	mg/L	1	02/06/2018 19:36	138715
Manganese	NELAP	0.0016	0.0050	X	<b>0.567</b>	mg/L	1	02/06/2018 19:36	138715
Nickel	NELAP	0.0033	0.0100		<b>0.0343</b>	mg/L	1	02/06/2018 19:36	138715
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 19:36	138715
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 19:36	138715
Zinc	NELAP	0.0021	0.0100		<b>0.0678</b>	mg/L	1	02/06/2018 19:36	138715
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0005</b>	mg/L	5	02/06/2018 18:22	138716
Thallium	NELAP	0.0005	0.0010	J	<b>0.0005</b>	mg/L	5	02/06/2018 18:22	138716
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 11:24	138711
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.39	4.63	J	<b>2.19</b>	mg/Kg-dry	1	02/05/2018 17:13	138659
Arsenic	NELAP	1.00	2.50		<b>10.7</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Barium	NELAP	0.10	0.25		<b>132</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Beryllium	NELAP	0.03	0.05		<b>1.02</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Boron	NELAP	0.50	2.00	J	<b>1.28</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Cadmium	NELAP	0.05	0.20		<b>&lt; 0.20</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Chromium	NELAP	0.20	0.50	X	<b>29.3</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Cobalt	NELAP	0.20	0.50		<b>12.1</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Copper	NELAP	0.15	0.50		<b>25.2</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Iron	NELAP	1.00	2.00	X	<b>32100</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Lead	NELAP	0.50	1.50		<b>15.8</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Magnesium	NELAP	0.40	5.00		<b>5170</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Manganese	NELAP	0.07	0.30	X	<b>869</b>	mg/Kg-dry	1	02/05/2018 21:26	138656
Nickel	NELAP	0.20	0.50		<b>30.7</b>	mg/Kg-dry	1	02/05/2018 21:26	138656

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-007

Client Sample ID: 2291V-8-B05

Matrix: SOLID

Collection Date: 01/31/2018 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.15	0.50		< 0.50	mg/Kg-dry	1	02/05/2018 21:26	138656
Thallium	NELAP	1.50	2.60		< 2.60	mg/Kg-dry	1	02/05/2018 21:26	138656
Vanadium	NELAP	0.20	1.00		52.5	mg/Kg-dry	1	02/05/2018 21:26	138656
Zinc	NELAP	0.40	1.00		59.8	mg/Kg-dry	1	02/05/2018 21:26	138656
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.40	1.00		< 1.00	mg/Kg-dry	10	02/06/2018 3:46	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.012		0.065	mg/Kg-dry	1	02/05/2018 10:40	138638
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.165	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
1,2-Dichlorobenzene	NELAP	0.197	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
1,3-Dichlorobenzene	NELAP	0.208	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
1,4-Dichlorobenzene	NELAP	0.197	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,4,5-Trichlorophenol	NELAP	0.136	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,4,6-Trichlorophenol	NELAP	0.156	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,4-Dichlorophenol	NELAP	0.150	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,4-Dimethylphenol	NELAP	0.157	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,4-Dinitrophenol	NELAP	0.132	1.24		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,4-Dinitrotoluene	NELAP	0.129	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2,6-Dinitrotoluene	NELAP	0.134	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2-Chloronaphthalene	NELAP	0.149	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2-Chlorophenol	NELAP	0.157	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2-Methylnaphthalene	NELAP	0.147	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2-Nitroaniline	NELAP	0.198	1.24		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
2-Nitrophenol	NELAP	0.139	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
3,3'-Dichlorobenzidine	NELAP	0.248	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
3-Nitroaniline	NELAP	0.186	1.24		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4,6-Dinitro-2-methylphenol	NELAP	0.134	1.24		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4-Bromophenyl phenyl ether	NELAP	0.114	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4-Chloro-3-methylphenol	NELAP	0.136	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4-Chloroaniline	NELAP	0.186	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4-Chlorophenyl phenyl ether	NELAP	0.123	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4-Nitroaniline	NELAP	0.186	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
4-Nitrophenol	NELAP	0.149	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Acenaphthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Acenaphthylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Benzo(a)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Benzo(a)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Benzo(b)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Benzo(g,h,i)perylene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Benzo(k)fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Bis(2-chloroethoxy)methane	NELAP	0.145	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Bis(2-chloroethyl)ether	NELAP	0.176	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Bis(2-chloroisopropyl)ether	NELAP	0.141	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.145	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Butyl benzyl phthalate	NELAP	0.125	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762





## Laboratory Results

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Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-007

Client Sample ID: 2291V-8-B05

Matrix: SOLID

Collection Date: 01/31/2018 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.151	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Chrysene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Dibenzo(a,h)anthracene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Dibenzofuran	NELAP	0.186	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Diethyl phthalate	NELAP	0.119	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Dimethyl phthalate	NELAP	0.113	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Di-n-butyl phthalate	NELAP	0.128	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Di-n-octyl phthalate	NELAP	0.129	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Fluoranthene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Fluorene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Hexachlorobenzene	NELAP	0.207	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Hexachlorobutadiene	NELAP	0.192	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Hexachlorocyclopentadiene	NELAP	0.126	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Hexachloroethane	NELAP	0.207	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Isophorone	NELAP	0.146	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
m,p-Cresol	NELAP	0.156	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Naphthalene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Nitrobenzene	NELAP	0.155	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
N-Nitroso-di-n-propylamine	NELAP	0.136	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
N-Nitrosodiphenylamine	NELAP	0.114	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
o-Cresol	NELAP	0.146	0.619		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Pentachlorophenol	NELAP	0.817	2.48		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Phenanthrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Phenol	NELAP	0.144	0.433		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Pyrene	NELAP	0.021	0.042		ND	mg/Kg-dry	1	02/07/2018 13:33	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		65.3	%REC	1	02/07/2018 13:33	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		59.1	%REC	1	02/07/2018 13:33	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		55.8	%REC	1	02/07/2018 13:33	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		51.3	%REC	1	02/07/2018 13:33	138762
Surr: Phenol-d5	*	0	38.8-103		59.6	%REC	1	02/07/2018 13:33	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		74.8	%REC	1	02/07/2018 13:33	138762
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,1,2,2-Tetrachloroethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,1,2-Trichloroethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,1-Dichloroethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,1-Dichloroethene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,2-Dichloroethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,2-Dichloropropane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
1,3-Dichloropropene, Total	*	0.00082	0.0033		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
2-Butanone	NELAP	0.102	0.163		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
2-Hexanone	NELAP	0.00815	0.0407		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
4-Methyl-2-pentanone	NELAP	0.00815	0.0407		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Acetone	NELAP	0.0134	0.0407		0.0776	mg/Kg-dry	1	02/03/2018 9:20	138663
Benzene	NELAP	0.00041	0.0008	J	0.0004	mg/Kg-dry	1	02/03/2018 9:20	138663
Bromodichloromethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-007

Client Sample ID: 2291V-8-B05

Matrix: SOLID

Collection Date: 01/31/2018 15:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Bromomethane	NELAP	0.00204	0.0082		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Carbon disulfide	NELAP	0.00244	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Carbon tetrachloride	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Chlorobenzene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Chloroethane	NELAP	0.00163	0.0082		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Chloroform	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Chloromethane	NELAP	0.00163	0.0082		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
cis-1,2-Dichloroethene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
cis-1,3-Dichloropropene	NELAP	0.00082	0.0033		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Dibromochloromethane	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Ethylbenzene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
m,p-Xylenes	NELAP	0.00163	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Methyl tert-butyl ether	NELAP	0.00041	0.0016		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Methylene chloride	NELAP	0.00108	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
o-Xylene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Styrene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Tetrachloroethene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Toluene	NELAP	0.00082	0.0041	J	0.0009	mg/Kg-dry	1	02/03/2018 9:20	138663
trans-1,2-Dichloroethene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
trans-1,3-Dichloropropene	NELAP	0.00082	0.0033		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Trichloroethene	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Vinyl acetate	NELAP	0.0163	0.0407		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Vinyl chloride	NELAP	0.00041	0.0016		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Xylenes, Total	NELAP	0.00082	0.0041		ND	mg/Kg-dry	1	02/03/2018 9:20	138663
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		114.9	%REC	1	02/03/2018 9:20	138663
Surr: 4-Bromofluorobenzene	*	0	82.1-116		100.1	%REC	1	02/03/2018 9:20	138663
Surr: Dibromofluoromethane	*	0	77.7-120		104.5	%REC	1	02/03/2018 9:20	138663
Surr: Toluene-d8	*	0	86-116		94.0	%REC	1	02/03/2018 9:20	138663

*LCSD recovered outside upper control limits for Vinyl acetate. Sample results are below the reporting limit. Data is reportable per the TNI Standard.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-009

Client Sample ID: 2291V-8-B07

Matrix: SOLID

Collection Date: 01/31/2018 15:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		27.2	%	1	02/02/2018 16:11	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		72.8	%	1	02/02/2018 16:11	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.14	0.34		0.52	mg/Kg-dry	1	02/07/2018 17:00	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.60		1	02/02/2018 19:24	R243064
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 19:47	138715
Barium	NELAP	0.0200	0.0500	J	0.0412	mg/L	1	02/06/2018 19:47	138715
Beryllium	NELAP	0.0003	0.0010	J	0.0003	mg/L	1	02/06/2018 19:47	138715
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 19:47	138715
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 19:47	138715
Chromium	NELAP	0.0040	0.0100	J	0.0057	mg/L	1	02/06/2018 19:47	138715
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 19:47	138715
Iron	NELAP	0.0070	0.0200		2.90	mg/L	1	02/06/2018 19:47	138715
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/06/2018 19:47	138715
Manganese	NELAP	0.0016	0.0050		0.0591	mg/L	1	02/06/2018 19:47	138715
Nickel	NELAP	0.0033	0.0100		< 0.0100	mg/L	1	02/06/2018 19:47	138715
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 19:47	138715
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 19:47	138715
Zinc	NELAP	0.0021	0.0100		0.0112	mg/L	1	02/06/2018 19:47	138715
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	02/06/2018 18:38	138716
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 18:38	138716
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 11:34	138711
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.47	4.90		< 4.90	mg/Kg-dry	1	02/05/2018 17:25	138659
Arsenic	NELAP	0.94	2.36		7.72	mg/Kg-dry	1	02/05/2018 21:38	138656
Barium	NELAP	0.09	0.24		385	mg/Kg-dry	1	02/05/2018 21:38	138656
Beryllium	NELAP	0.03	0.05		0.84	mg/Kg-dry	1	02/05/2018 21:38	138656
Boron	NELAP	0.47	1.89	J	1.26	mg/Kg-dry	1	02/05/2018 21:38	138656
Cadmium	NELAP	0.05	0.19		0.32	mg/Kg-dry	1	02/05/2018 21:38	138656
Chromium	NELAP	0.19	0.47	X	22.1	mg/Kg-dry	1	02/05/2018 21:38	138656
Cobalt	NELAP	0.19	0.47		11.2	mg/Kg-dry	1	02/05/2018 21:38	138656
Copper	NELAP	0.14	0.47		24.0	mg/Kg-dry	1	02/05/2018 21:38	138656
Iron	NELAP	0.94	1.89	X	24200	mg/Kg-dry	1	02/05/2018 21:38	138656
Lead	NELAP	0.47	1.42		19.5	mg/Kg-dry	1	02/05/2018 21:38	138656
Magnesium	NELAP	0.38	4.72		3840	mg/Kg-dry	1	02/05/2018 21:38	138656
Manganese	NELAP	0.13	0.57	X	2240	mg/Kg-dry	2	02/06/2018 16:45	138656
Nickel	NELAP	0.19	0.47		20.8	mg/Kg-dry	1	02/05/2018 21:38	138656
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/05/2018 21:38	138656
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/05/2018 21:38	138656
Vanadium	NELAP	0.19	0.94		35.0	mg/Kg-dry	1	02/05/2018 21:38	138656
Zinc	NELAP	0.38	0.94		117	mg/Kg-dry	1	02/05/2018 21:38	138656



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-009

Client Sample ID: 2291V-8-B07

Matrix: SOLID

Collection Date: 01/31/2018 15:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/06/2018 4:03	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.004	0.014		0.044	mg/Kg-dry	1	02/05/2018 13:29	138638
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.178	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
1,2-Dichlorobenzene	NELAP	0.213	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
1,3-Dichlorobenzene	NELAP	0.225	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
1,4-Dichlorobenzene	NELAP	0.213	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,4,5-Trichlorophenol	NELAP	0.147	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,4,6-Trichlorophenol	NELAP	0.169	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,4-Dichlorophenol	NELAP	0.162	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,4-Dimethylphenol	NELAP	0.170	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,4-Dinitrophenol	NELAP	0.143	1.34		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,4-Dinitrotoluene	NELAP	0.139	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2,6-Dinitrotoluene	NELAP	0.145	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2-Chloronaphthalene	NELAP	0.161	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2-Chlorophenol	NELAP	0.170	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2-Methylnaphthalene	NELAP	0.159	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2-Nitroaniline	NELAP	0.214	1.34		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
2-Nitrophenol	NELAP	0.150	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
3,3'-Dichlorobenzidine	NELAP	0.268	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
3-Nitroaniline	NELAP	0.201	1.34		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4,6-Dinitro-2-methylphenol	NELAP	0.145	1.34		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4-Bromophenyl phenyl ether	NELAP	0.123	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4-Chloro-3-methylphenol	NELAP	0.147	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4-Chloroaniline	NELAP	0.201	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4-Chlorophenyl phenyl ether	NELAP	0.133	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4-Nitroaniline	NELAP	0.201	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
4-Nitrophenol	NELAP	0.161	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Acenaphthene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Acenaphthylene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Anthracene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Benzo(a)anthracene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Benzo(a)pyrene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Benzo(b)fluoranthene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Benzo(g,h,i)perylene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Benzo(k)fluoranthene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Bis(2-chloroethoxy)methane	NELAP	0.157	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Bis(2-chloroethyl)ether	NELAP	0.190	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Bis(2-chloroisopropyl)ether	NELAP	0.153	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.157	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Butyl benzyl phthalate	NELAP	0.135	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Carbazole	NELAP	0.163	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Chrysene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Dibenzo(a,h)anthracene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Dibenzofuran	NELAP	0.201	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Diethyl phthalate	NELAP	0.129	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-009

Client Sample ID: 2291V-8-B07

Matrix: SOLID

Collection Date: 01/31/2018 15:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dimethyl phthalate	NELAP	0.122	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Di-n-butyl phthalate	NELAP	0.138	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Di-n-octyl phthalate	NELAP	0.139	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Fluoranthene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Fluorene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Hexachlorobenzene	NELAP	0.224	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Hexachlorobutadiene	NELAP	0.208	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Hexachlorocyclopentadiene	NELAP	0.137	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Hexachloroethane	NELAP	0.224	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Isophorone	NELAP	0.158	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
m,p-Cresol	NELAP	0.169	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Naphthalene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Nitrobenzene	NELAP	0.167	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
N-Nitroso-di-n-propylamine	NELAP	0.147	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
N-Nitrosodiphenylamine	NELAP	0.123	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
o-Cresol	NELAP	0.158	0.670		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Pentachlorophenol	NELAP	0.884	2.68		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Phenanthrene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Phenol	NELAP	0.155	0.469		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Pyrene	NELAP	0.022	0.046		ND	mg/Kg-dry	1	02/07/2018 14:29	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114	S	39.1	%REC	1	02/07/2018 14:29	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		37.4	%REC	1	02/07/2018 14:29	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2	S	33.4	%REC	1	02/07/2018 14:29	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2	S	33.2	%REC	1	02/07/2018 14:29	138762
Surr: Phenol-d5	*	0	38.8-103	S	36.3	%REC	1	02/07/2018 14:29	138762
Surr: p-Terphenyl-d14	*	0	43.2-116	S	41.7	%REC	1	02/07/2018 14:29	138762

Surrogate recovery is outside QC limits due to sample composition.

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,1,2,2-Tetrachloroethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,1,2-Trichloroethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,1-Dichloroethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,1-Dichloroethene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,2-Dichloroethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,2-Dichloropropane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
1,3-Dichloropropene, Total	*	0.00151	0.0060		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
2-Butanone	NELAP	0.189	0.302		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
2-Hexanone	NELAP	0.0151	0.0756		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
4-Methyl-2-pentanone	NELAP	0.0151	0.0756		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Acetone	NELAP	0.0249	0.0756		0.457	mg/Kg-dry	1	02/04/2018 20:55	138669
Benzene	NELAP	0.00076	0.0015	J	0.0010	mg/Kg-dry	1	02/04/2018 20:55	138669
Bromodichloromethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Bromoform	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Bromomethane	NELAP	0.00378	0.0151		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Carbon disulfide	NELAP	0.00454	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Carbon tetrachloride	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-009

Client Sample ID: 2291V-8-B07

Matrix: SOLID

Collection Date: 01/31/2018 15:35

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chlorobenzene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Chloroethane	NELAP	0.00302	0.0151		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Chloroform	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Chloromethane	NELAP	0.00302	0.0151		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
cis-1,2-Dichloroethene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
cis-1,3-Dichloropropene	NELAP	0.00151	0.0060		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Dibromochloromethane	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Ethylbenzene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
m,p-Xylenes	NELAP	0.00302	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Methyl tert-butyl ether	NELAP	0.00076	0.0030		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Methylene chloride	NELAP	0.00201	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
o-Xylene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Styrene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Tetrachloroethene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Toluene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
trans-1,2-Dichloroethene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
trans-1,3-Dichloropropene	NELAP	0.00151	0.0060		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Trichloroethene	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Vinyl acetate	NELAP	0.0302	0.0756		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Vinyl chloride	NELAP	0.00076	0.0030		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Xylenes, Total	NELAP	0.00151	0.0076		ND	mg/Kg-dry	1	02/04/2018 20:55	138669
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>116.9</b>	%REC	1	02/04/2018 20:55	138669
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>110.2</b>	%REC	1	02/04/2018 20:55	138669
Surr: Dibromofluoromethane	*	0	77.7-120		<b>107.9</b>	%REC	1	02/04/2018 20:55	138669
Surr: Toluene-d8	*	0	86-116		<b>101.2</b>	%REC	1	02/04/2018 20:55	138669

*Allowable Marginal Exceedance of 1,1,2-trichloroethane in the laboratory control sample is verified per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020047-010

Client Sample ID: 2291V-8-B08

Matrix: SOLID

Collection Date: 01/31/2018 15:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		27.4	%	1	02/02/2018 16:11	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		72.6	%	1	02/02/2018 16:11	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.30		0.33	mg/Kg-dry	1	02/07/2018 17:04	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.67		1	02/05/2018 15:49	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		1.20	mg/L	1	02/12/2018 15:13	138849
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 19:50	138715
Barium	NELAP	0.0200	0.0500		0.194	mg/L	1	02/06/2018 19:50	138715
Beryllium	NELAP	0.0003	0.0010	J	0.0007	mg/L	1	02/06/2018 19:50	138715
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 19:50	138715
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 19:50	138715
Chromium	NELAP	0.0040	0.0100		0.0174	mg/L	1	02/06/2018 19:50	138715
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 19:50	138715
Iron	NELAP	0.0070	0.0200	X	14.1	mg/L	1	02/06/2018 19:50	138715
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/06/2018 19:50	138715
Manganese	NELAP	0.0016	0.0050		0.147	mg/L	1	02/06/2018 19:50	138715
Nickel	NELAP	0.0033	0.0100		0.0101	mg/L	1	02/06/2018 19:50	138715
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 19:50	138715
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 19:50	138715
Zinc	NELAP	0.0021	0.0100		0.0586	mg/L	1	02/06/2018 19:50	138715
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	02/06/2018 18:46	138716
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 18:46	138716
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 11:38	138711
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.42	4.72	J	2.67	mg/Kg-dry	1	02/05/2018 17:42	138659
Arsenic	NELAP	0.91	2.27		9.38	mg/Kg-dry	1	02/05/2018 21:44	138656
Barium	NELAP	0.09	0.23		384	mg/Kg-dry	1	02/05/2018 21:44	138656
Beryllium	NELAP	0.03	0.05		1.01	mg/Kg-dry	1	02/05/2018 21:44	138656
Boron	NELAP	0.45	1.82	J	0.57	mg/Kg-dry	1	02/05/2018 21:44	138656
Cadmium	NELAP	0.05	0.18	J	0.17	mg/Kg-dry	1	02/05/2018 21:44	138656
Chromium	NELAP	0.18	0.45	X	27.4	mg/Kg-dry	1	02/05/2018 21:44	138656
Cobalt	NELAP	0.18	0.45		10.8	mg/Kg-dry	1	02/05/2018 21:44	138656
Copper	NELAP	0.14	0.45		25.8	mg/Kg-dry	1	02/05/2018 21:44	138656
Iron	NELAP	0.91	1.82	X	29600	mg/Kg-dry	1	02/05/2018 21:44	138656
Lead	NELAP	0.45	1.36		19.0	mg/Kg-dry	1	02/05/2018 21:44	138656
Magnesium	NELAP	0.36	4.55		4280	mg/Kg-dry	1	02/05/2018 21:44	138656
Manganese	NELAP	0.06	0.27	X	1660	mg/Kg-dry	1	02/05/2018 21:44	138656
Nickel	NELAP	0.18	0.45		24.6	mg/Kg-dry	1	02/05/2018 21:44	138656
Silver	NELAP	0.14	0.45		< 0.45	mg/Kg-dry	1	02/05/2018 21:44	138656
Thallium	NELAP	1.36	2.36		< 2.36	mg/Kg-dry	1	02/05/2018 21:44	138656

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Matrix: SOLID

Collection Date: 01/31/2018 15:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Vanadium	NELAP	0.18	0.91		45.4	mg/Kg-dry	1	02/05/2018 21:44	138656
Zinc	NELAP	0.36	0.91		118	mg/Kg-dry	1	02/05/2018 21:44	138656
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.36	0.91	J	0.44	mg/Kg-dry	10	02/06/2018 4:11	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.004	0.014		0.043	mg/Kg-dry	1	02/05/2018 13:31	138638
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.179	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
1,2-Dichlorobenzene	NELAP	0.214	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
1,3-Dichlorobenzene	NELAP	0.227	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
1,4-Dichlorobenzene	NELAP	0.214	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,4,5-Trichlorophenol	NELAP	0.148	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,4,6-Trichlorophenol	NELAP	0.170	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,4-Dichlorophenol	NELAP	0.163	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,4-Dimethylphenol	NELAP	0.171	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,4-Dinitrophenol	NELAP	0.144	1.35		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,4-Dinitrotoluene	NELAP	0.140	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2,6-Dinitrotoluene	NELAP	0.146	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2-Chloronaphthalene	NELAP	0.162	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2-Chlorophenol	NELAP	0.171	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2-Methylnaphthalene	NELAP	0.161	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2-Nitroaniline	NELAP	0.216	1.35		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
2-Nitrophenol	NELAP	0.151	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
3,3'-Dichlorobenzidine	NELAP	0.270	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
3-Nitroaniline	NELAP	0.202	1.35		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4,6-Dinitro-2-methylphenol	NELAP	0.146	1.35		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4-Bromophenyl phenyl ether	NELAP	0.124	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4-Chloro-3-methylphenol	NELAP	0.148	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4-Chloroaniline	NELAP	0.202	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4-Chlorophenyl phenyl ether	NELAP	0.134	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4-Nitroaniline	NELAP	0.202	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
4-Nitrophenol	NELAP	0.162	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Acenaphthene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Acenaphthylene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Anthracene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Benzo(a)anthracene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Benzo(a)pyrene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Benzo(b)fluoranthene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Benzo(g,h,i)perylene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Benzo(k)fluoranthene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Bis(2-chloroethoxy)methane	NELAP	0.158	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Bis(2-chloroethyl)ether	NELAP	0.192	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Bis(2-chloroisopropyl)ether	NELAP	0.154	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Bis(2-ethylhexyl)phthalate	NELAP	0.158	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Butyl benzyl phthalate	NELAP	0.136	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Carbazole	NELAP	0.165	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Chrysene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762



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Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Dibenzo(a,h)anthracene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Dibenzofuran	NELAP	0.202	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Diethyl phthalate	NELAP	0.130	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Dimethyl phthalate	NELAP	0.123	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Di-n-butyl phthalate	NELAP	0.139	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Di-n-octyl phthalate	NELAP	0.140	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Fluoranthene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Fluorene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Hexachlorobenzene	NELAP	0.225	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Hexachlorobutadiene	NELAP	0.209	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Hexachlorocyclopentadiene	NELAP	0.138	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Hexachloroethane	NELAP	0.225	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Isophorone	NELAP	0.159	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
m,p-Cresol	NELAP	0.170	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Naphthalene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Nitrobenzene	NELAP	0.169	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
N-Nitroso-di-n-propylamine	NELAP	0.148	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
N-Nitrosodiphenylamine	NELAP	0.124	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
o-Cresol	NELAP	0.159	0.675		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Pentachlorophenol	NELAP	0.890	2.70		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Phenanthrene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Phenol	NELAP	0.156	0.472		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Pyrene	NELAP	0.023	0.046		ND	mg/Kg-dry	1	02/07/2018 14:57	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		49.2	%REC	1	02/07/2018 14:57	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		44.3	%REC	1	02/07/2018 14:57	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2		40.0	%REC	1	02/07/2018 14:57	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2		38.8	%REC	1	02/07/2018 14:57	138762
Surr: Phenol-d5	*	0	38.8-103		42.3	%REC	1	02/07/2018 14:57	138762
Surr: p-Terphenyl-d14	*	0	43.2-116		51.4	%REC	1	02/07/2018 14:57	138762
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,1,2,2-Tetrachloroethane	*	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,1,2-Trichloroethane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,1-Dichloroethane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,1-Dichloroethene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,2-Dichloroethane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,2-Dichloropropane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
2-Butanone	NELAP	0.152	0.304		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
2-Hexanone	NELAP	0.0122	0.0609		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
4-Methyl-2-pentanone	NELAP	0.0122	0.0609		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Acetone	NELAP	0.0201	0.0609		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Benzene	NELAP	0.00061	0.0012		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Bromodichloromethane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Bromoform	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Bromomethane	NELAP	0.00304	0.0122		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Carbon disulfide	NELAP	0.00365	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724



# Laboratory Results

<http://www.teklabinc.com/>

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Work Order: 18020047

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

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Matrix: SOLID

Collection Date: 01/31/2018 15:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbon tetrachloride	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Chlorobenzene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Chloroethane	NELAP	0.00243	0.0122		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Chloroform	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Chloromethane	NELAP	0.00243	0.0122		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
cis-1,2-Dichloroethene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
cis-1,3-Dichloropropene	NELAP	0.00122	0.0049		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Dibromochloromethane	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Ethylbenzene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Methyl tert-butyl ether	NELAP	0.00061	0.0024		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Methylene chloride	NELAP	0.00162	0.0122		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Styrene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Tetrachloroethene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Toluene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
trans-1,2-Dichloroethene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
trans-1,3-Dichloropropene	NELAP	0.00122	0.0049		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Trichloroethene	NELAP	0.00122	0.0061		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Vinyl acetate	NELAP	0.0243	0.0609		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Vinyl chloride	NELAP	0.00061	0.0024		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Xylenes, Total	NELAP	0.00122	0.0122		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
1,3-Dichloropropene, Total	*	0.00122	0.0049		ND	mg/Kg-dry	1	02/05/2018 14:35	138724
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		103.8	%REC	1	02/05/2018 14:35	138724
Surr: 4-Bromofluorobenzene	*	0	82.1-116		103.4	%REC	1	02/05/2018 14:35	138724
Surr: Dibromofluoromethane	*	0	77.7-120		100.8	%REC	1	02/05/2018 14:35	138724
Surr: Toluene-d8	*	0	86-116		102.4	%REC	1	02/05/2018 14:35	138724

LCS & LCSD recovered outside upper control limits for multiple compounds. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

## CHAIN OF CUSTODY RECORD

<b>Client Contact</b>	<b>Laboratory</b>	Project Name: <u>IL173 McHenry Co</u>	COC No.: <u>3</u> of <u>4</u>
Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	Lab: <b>TekLab, Inc.</b> Address: <b>5445 Horseshoe Lake Road</b> <b>Collinsville, IL 62234</b> Phone: <b>877-344-1003</b> Contact: <b>Shelly Hennessy</b> email: shennessy@teklabinc.com	Project No.: <u>PTB184-006, DA AF 7-01A</u>	Lab Job No.: <u>18020047</u>
		TAT: <input checked="" type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other	Sample Temp: <u>24°C ice</u>
		Sampler: <u>Ancosha V.</u>	Matrix Key:

**Special Instructions:**  
See Table 2 for complete parameter lists and minimum reporting limits.  
\* If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal.  
\*\* If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.

					ANALYSES											
Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	
18020047-001	2291V-8-B01	1/31/18	1400	S	X	X					X	X	X	X	X	
-002	2291V-8-B02	1/31/18	1420													
-003	2291V-8-B02 DUP	1/31/18	1425													
-004	2291V-8-B03-1	1/31/18	1430													
-005	2291V-8-B03-2	1/31/18	1455													
-006	2291V-8-B04	1/31/18	1505													
-007	2291V-8-B05	1/31/18	1510													
-008	2291V-8-B06	1/31/18	1525													
-009	2291V-8-B07	1/31/18	1535													
-010	2291V-8-B08	1/31/18	1550	✓	✓	✓					✓	✓	✓	✓	✓	
-011	Trip Blank 3	1/31/18	1550		X											

**Matrix Key:**  
W: Water  
S: Soil  
SL: Sludge  
S: Sediment  
L: Leachate  
DW: Drinking Water  
OL: Oil  
O: Other

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	Comments
18020047-001	2291V-8-B01	1/31/18	1400	S	X	X					X	X	X	X	X	
-002	2291V-8-B02	1/31/18	1420													
-003	2291V-8-B02 DUP	1/31/18	1425													
-004	2291V-8-B03-1	1/31/18	1430													
-005	2291V-8-B03-2	1/31/18	1455													
-006	2291V-8-B04	1/31/18	1505													
-007	2291V-8-B05	1/31/18	1510													
-008	2291V-8-B06	1/31/18	1525													
-009	2291V-8-B07	1/31/18	1535													
-010	2291V-8-B08	1/31/18	1550	✓	✓	✓					✓	✓	✓	✓	✓	
-011	Trip Blank 3	1/31/18	1550		X											

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/1/18 0800</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/1/18 11:50</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/1/18 16:40</u>	Received by: <u>[Signature]</u>	Date/Time: <u>2/2/18 10:50</u>
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-145720-4  
Client Project/Site: IDOT - AE7-01

For:  
Andrews Engineering Inc.  
3300 Ginger Creek Drive  
Springfield, Illinois 62711

Attn: Ms. Colleen Grey



Authorized for release by:  
6/5/2018 8:13:39 AM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-4

**Client Sample ID: 2291V-8-B01**

**Lab Sample ID: 500-145720-8**

**Date Collected: 05/18/18 11:05**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 76.6**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.22		0.22	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
1,2-Dichlorobenzene	<0.22		0.22	0.051	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
1,3-Dichlorobenzene	<0.22		0.22	0.048	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
1,4-Dichlorobenzene	<0.22		0.22	0.055	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,2'-oxybis[1-chloropropane]	<0.22		0.22	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,4,5-Trichlorophenol	<0.43		0.43	0.098	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,4,6-Trichlorophenol	<0.43		0.43	0.15	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,4-Dichlorophenol	<0.43		0.43	0.10	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,4-Dimethylphenol	<0.43		0.43	0.16	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,4-Dinitrophenol	<0.87		0.87	0.76	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,4-Dinitrotoluene	<0.22		0.22	0.068	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2,6-Dinitrotoluene	<0.22		0.22	0.084	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2-Chloronaphthalene	<0.22		0.22	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2-Chlorophenol	<0.22		0.22	0.073	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2-Methylnaphthalene	<0.087		0.087	0.0079	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2-Methylphenol	<0.22		0.22	0.069	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2-Nitroaniline	<0.22		0.22	0.058	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
2-Nitrophenol	<0.43		0.43	0.10	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
3 & 4 Methylphenol	<0.22		0.22	0.072	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
3,3'-Dichlorobenzidine	<0.22		0.22	0.060	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
3-Nitroaniline	<0.43		0.43	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4,6-Dinitro-2-methylphenol	<0.87		0.87	0.35	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4-Bromophenyl phenyl ether	<0.22		0.22	0.057	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4-Chloro-3-methylphenol	<0.43		0.43	0.15	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4-Chloroaniline	<0.87		0.87	0.20	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4-Chlorophenyl phenyl ether	<0.22		0.22	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4-Nitroaniline	<0.43		0.43	0.18	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
4-Nitrophenol	<0.87		0.87	0.41	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Acenaphthene	<0.043		0.043	0.0077	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Acenaphthylene	<0.043		0.043	0.0057	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Anthracene	<0.043		0.043	0.0072	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Benzo[a]anthracene</b>	<b>0.019</b>	<b>J</b>	0.043	0.0058	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Benzo[a]pyrene</b>	<b>0.021</b>	<b>J</b>	0.043	0.0083	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Benzo[b]fluoranthene</b>	<b>0.024</b>	<b>J</b>	0.043	0.0093	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Benzo[g,h,i]perylene	<0.043		0.043	0.014	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Benzo[k]fluoranthene	<0.043		0.043	0.013	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Bis(2-chloroethoxy)methane	<0.22		0.22	0.044	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Bis(2-chloroethyl)ether	<0.22		0.22	0.064	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Bis(2-ethylhexyl) phthalate	<0.22		0.22	0.078	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Butyl benzyl phthalate	<0.22		0.22	0.082	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Carbazole	<0.22		0.22	0.11	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Chrysene</b>	<b>0.023</b>	<b>J</b>	0.043	0.012	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Dibenz(a,h)anthracene	<0.043		0.043	0.0083	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Dibenzofuran	<0.22		0.22	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Diethyl phthalate	<0.22		0.22	0.073	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Dimethyl phthalate	<0.22		0.22	0.056	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Di-n-butyl phthalate	<0.22		0.22	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Di-n-octyl phthalate	<0.22		0.22	0.070	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Fluoranthene</b>	<b>0.033</b>	<b>J</b>	0.043	0.0080	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1

TestAmerica Chicago

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-4

**Client Sample ID: 2291V-8-B01**

**Lab Sample ID: 500-145720-8**

**Date Collected: 05/18/18 11:05**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 76.6**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.043		0.043	0.0060	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Hexachlorobenzene	<0.087		0.087	0.0099	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Hexachlorobutadiene	<0.22		0.22	0.067	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Hexachlorocyclopentadiene	<0.87		0.87	0.25	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Hexachloroethane	<0.22		0.22	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Indeno[1,2,3-cd]pyrene	<0.043		0.043	0.011	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Isophorone	<0.22		0.22	0.048	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Naphthalene	<0.043		0.043	0.0066	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Nitrobenzene	<0.043		0.043	0.011	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
N-Nitrosodi-n-propylamine	<0.087		0.087	0.052	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
N-Nitrosodiphenylamine	<0.22		0.22	0.051	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Pentachlorophenol	<0.87		0.87	0.69	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Phenanthrene</b>	<b>0.013</b>	<b>J</b>	0.043	0.0060	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
Phenol	<0.22		0.22	0.095	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1
<b>Pyrene</b>	<b>0.032</b>	<b>J</b>	0.043	0.0085	mg/Kg	☼	05/29/18 07:40	06/01/18 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	52		25 - 139	05/29/18 07:40	06/01/18 19:18	1
2-Fluorobiphenyl	90		44 - 121	05/29/18 07:40	06/01/18 19:18	1
2-Fluorophenol	126		46 - 133	05/29/18 07:40	06/01/18 19:18	1
Nitrobenzene-d5	89		41 - 120	05/29/18 07:40	06/01/18 19:18	1
Phenol-d5	117		46 - 125	05/29/18 07:40	06/01/18 19:18	1
Terphenyl-d14	119		35 - 160	05/29/18 07:40	06/01/18 19:18	1

# Definitions/Glossary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-4

## Qualifiers

### GC/MS Semi VOA

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

## Glossary

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

# Accreditation/Certification Summary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-4

## Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids









# Illinois Environmental Protection Agency

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

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

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

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

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

### I. Source Location Information

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

Project Name: FAP 303 (IL 173) Office Phone Number, if available: \_\_\_\_\_

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

28955 West IL 173

City: Antioch State: IL Zip Code: 60081

County: McHenry Township: Burton and Antioch

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

Latitude: 42.48078 Longitude: -88.20175

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: 0970055146 BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Kristine A. Kutscher

Email, if available: Kristine.Kutscher@illinois.gov

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

Project Name: FAP 303 (IL 173)

Latitude: 42.48078 Longitude: -88.20175

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and approximately located 35 Ill. Adm. Code 1100.610(a):

LOCATIONS 2291V-9-B01, -B03, AND -B04 WERE SAMPLED ADJACENT TO SITE 2291V-9. SEE TABLE 3f AND FIGURES 4 THROUGH 6 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT.

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

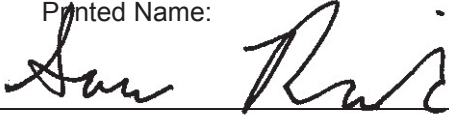
TEKLAB INC. ANALYTICAL REPORT - WORK ORDER: 18020048  
 TESTAMERICA ANALYTICAL REPORT - JOB ID NUMBER: 500-145720-4

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

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

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

Company Name: Andrews Engineering, Inc.  
 Street Address: 420 Eisenhower Lane North  
 City: Lombard State: IL Zip Code: 60148  
 Phone: 630-953-3332

Savo Radulovic  
 Printed Name:  
  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

June 15, 2018  
 Date:



The following table summarizes the results of laboratory analysis of site soil samples. In reading the table,

- Only parameters reported at concentrations above the most stringent MAC are listed.
- Samples with the notation “**No Contaminants of Concern Noted**” were below the most stringent MAC.

The laboratory report for site soils follows this summary table.

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Volatile Organic Compounds (mg/kg)</b>
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dichloroethane
1,2-Dichloropropane
1,3-Dichloropropene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Ethylbenzene
Methylene chloride
Methyl-tert-butyl-ether (MTBE)
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl acetate
Vinyl chloride
Xylenes, total
<b>Semivolatile Organic Compounds (mg/kg)</b>
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Methylphenol
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo(a,h)anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene

THIS TABLE LISTS THE PARAMETERS ANALYZED IN SITE SOIL SAMPLES

**ANALYTICAL PARAMETERS**

<b>Semivolatile Organic Compounds (mg/kg)</b>
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene
<b>Inorganic Compounds, Total (mg/kg)</b>
Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Vanadium
Zinc
Cyanide
<b>TCLP/SPLP Inorganics (mg/L)</b>
Antimony
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Iron
Lead
Manganese
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide

**ISGS Site 2291V-9  
Thelen Excavating**

Sample ID	2291V-9-B01	2291V-9-B03	2291V-9-B04	Maximum Allowable Concentration							
Sample Depth (ft)	0-4	0-7	0-5	<sup>1</sup> Most Stringent	<sup>2</sup> Outside a Populated Area	<sup>3</sup> Within a Populated non-Metropolitan Statistical Area	<sup>4</sup> Within Chicago Corporate Limits	<sup>5</sup> Within a Metropolitan Statistical Area			
Sample Date	1/31/2018	1/31/2018	1/31/2018								
PID	0	0	0								
Sample pH	8.89	8.18	7.55								
Matrix	Soil	Soil	Soil								
<b>Inorganic Compounds, Total (mg/kg)</b>											
Arsenic	5.47	12.6	1,3,*	9.12	11.3	--	11.3	--	13		
<b>SPLP Metals (mg/L)</b>											
Lead	0.0508	6	0.0171	ND	m	--	--	--	--		
<b>TCLP Metals (mg/L)</b>											
Lead	0.0086	6	ND	NT	m	--	--	--	--		



February 22, 2018

Colleen Grey  
Andrews Engineering, Inc.  
3300 Ginger Creek Drive  
Springfield, IL 62711-7233  
TEL: (217) 787-2334  
FAX: (217) 787-9495



**RE:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**WorkOrder:** 18020048

Dear Colleen Grey:

TEKLAB, INC received 7 samples on 2/1/2018 11:50:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Shelly A. Hennessy  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020048

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 22-Feb-18

### Abbr Definition

- \* Analytes on report marked with an asterisk are not NELAP accredited
- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count ( > 200 CFU )

### Qualifiers

- |  |   |
|--|---|
| # - Unknown hydrocarbon                                      | B - Analyte detected in associated Method Blank |
| E - Value above quantitation range                           | H - Holding times exceeded                      |
| I - Associated internal standard was outside method criteria | J - Analyte detected below quantitation limits  |
| M - Manual Integration used to determine area response       | ND - Not Detected at the Reporting Limit        |
| R - RPD outside accepted recovery limits                     | S - Spike Recovery outside recovery limits      |
| T - TIC(Tentatively identified compound)                     | X - Value exceeds Maximum Contaminant Level     |



## Accreditations

<http://www.teklabinc.com/>

**Client:** Andrews Engineering, Inc.

**Work Order:** 18020048

**Client Project:** IL 173 McHenry Co PTB 184-006, 01A AE7-01A

**Report Date:** 22-Feb-18

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2019	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2018	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2018	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2018	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2018	Collinsville
Arkansas	ADEQ	88-0966		3/14/2018	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2019	Collinsville
Kentucky	KDEP	98006		12/31/2018	Collinsville
Kentucky	UST	0073		1/31/2019	Collinsville
Louisiana	LDPH	LA170027		12/31/2018	Collinsville
Missouri	MDNR	930		1/31/2019	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Oklahoma	ODEQ	9978		8/31/2018	Collinsville
Tennessee	TDEC	04905		1/31/2019	Collinsville



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-001

Client Sample ID: 2291V-9-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>8.0</b>	%	1	02/02/2018 16:11	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>92.0</b>	%	1	02/02/2018 16:11	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.10	0.24		<b>&lt; 0.24</b>	mg/Kg-dry	1	02/07/2018 17:30	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.89</b>		1	02/05/2018 15:29	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.0212</b>	mg/L	1	02/08/2018 10:42	138800
Lead	NELAP	0.0060	0.0070		<b>0.0086</b>	mg/L	1	02/08/2018 10:42	138800
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		<b>&lt; 0.0250</b>	mg/L	1	02/06/2018 19:54	138715
Barium	NELAP	0.0200	0.0500		<b>0.112</b>	mg/L	1	02/06/2018 19:54	138715
Beryllium	NELAP	0.0003	0.0010	J	<b>0.0004</b>	mg/L	1	02/06/2018 19:54	138715
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 19:54	138715
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 19:54	138715
Chromium	NELAP	0.0040	0.0100		<b>0.0123</b>	mg/L	1	02/06/2018 19:54	138715
Cobalt	NELAP	0.0022	0.0100	J	<b>0.0025</b>	mg/L	1	02/06/2018 19:54	138715
Iron	NELAP	0.0070	0.0200	X	<b>10.7</b>	mg/L	1	02/06/2018 19:54	138715
Lead	NELAP	0.0060	0.0070	X	<b>0.0508</b>	mg/L	1	02/06/2018 19:54	138715
Manganese	NELAP	0.0016	0.0050		<b>0.131</b>	mg/L	1	02/06/2018 19:54	138715
Nickel	NELAP	0.0033	0.0100	J	<b>0.0099</b>	mg/L	1	02/06/2018 19:54	138715
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 19:54	138715
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 19:54	138715
Zinc	NELAP	0.0021	0.0100		<b>0.0503</b>	mg/L	1	02/06/2018 19:54	138715
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY IC PMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0004</b>	mg/L	5	02/06/2018 18:54	138716
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 18:54	138716
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		<b>&lt; 0.00020</b>	mg/L	1	02/07/2018 11:40	138711
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		<b>&lt; 4.81</b>	mg/Kg-dry	1	02/05/2018 17:48	138659
Arsenic	NELAP	0.91	2.27		<b>5.47</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Barium	NELAP	0.09	0.23		<b>59.7</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Beryllium	NELAP	0.03	0.05		<b>0.27</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Boron	NELAP	0.45	1.82		<b>3.66</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Cadmium	NELAP	0.05	0.18		<b>0.19</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Chromium	NELAP	0.18	0.45	X	<b>29.3</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Cobalt	NELAP	0.18	0.45		<b>4.70</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Copper	NELAP	0.14	0.45		<b>22.3</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Iron	NELAP	0.91	1.82		<b>13800</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Lead	NELAP	0.45	1.36	X	<b>104</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Magnesium	NELAP	0.36	4.55		<b>35700</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Manganese	NELAP	0.06	0.27		<b>372</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Nickel	NELAP	0.18	0.45		<b>11.7</b>	mg/Kg-dry	1	02/05/2018 22:08	138656
Silver	NELAP	0.14	0.45		<b>&lt; 0.45</b>	mg/Kg-dry	1	02/05/2018 22:08	138656

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-001

Client Sample ID: 2291V-9-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Thallium	NELAP	1.36	2.36		< 2.36	mg/Kg-dry	1	02/05/2018 22:08	138656
Vanadium	NELAP	0.18	0.91		24.3	mg/Kg-dry	1	02/05/2018 22:08	138656
Zinc	NELAP	0.36	0.91		62.8	mg/Kg-dry	1	02/05/2018 22:08	138656
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.36	0.91		< 0.91	mg/Kg-dry	10	02/06/2018 4:19	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.003	0.010		0.014	mg/Kg-dry	1	02/05/2018 12:46	138638
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	2.09	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
1,2-Dichlorobenzene	NELAP	2.49	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
1,3-Dichlorobenzene	NELAP	2.63	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
1,4-Dichlorobenzene	NELAP	2.49	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,4,5-Trichlorophenol	NELAP	1.72	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,4,6-Trichlorophenol	NELAP	1.98	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,4-Dichlorophenol	NELAP	1.90	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,4-Dimethylphenol	NELAP	1.99	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,4-Dinitrophenol	NELAP	1.68	15.7		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,4-Dinitrotoluene	NELAP	1.63	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2,6-Dinitrotoluene	NELAP	1.69	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2-Chloronaphthalene	NELAP	1.88	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2-Chlorophenol	NELAP	1.99	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2-Methylnaphthalene	NELAP	1.87	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2-Nitroaniline	NELAP	2.51	15.7		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
2-Nitrophenol	NELAP	1.76	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
3,3'-Dichlorobenzidine	NELAP	3.14	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
3-Nitroaniline	NELAP	2.35	15.7		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4,6-Dinitro-2-methylphenol	NELAP	1.69	15.7		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4-Bromophenyl phenyl ether	NELAP	1.44	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4-Chloro-3-methylphenol	NELAP	1.72	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4-Chloroaniline	NELAP	2.35	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4-Chlorophenyl phenyl ether	NELAP	1.55	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4-Nitroaniline	NELAP	2.35	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
4-Nitrophenol	NELAP	1.88	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Acenaphthene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Acenaphthylene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Anthracene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Benzo(a)anthracene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Benzo(a)pyrene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Benzo(b)fluoranthene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Benzo(g,h,i)perylene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Benzo(k)fluoranthene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Bis(2-chloroethoxy)methane	NELAP	1.83	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Bis(2-chloroethyl)ether	NELAP	2.23	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Bis(2-chloroisopropyl)ether	NELAP	1.79	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Bis(2-ethylhexyl)phthalate	NELAP	1.83	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Butyl benzyl phthalate	NELAP	1.58	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Carbazole	NELAP	1.91	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-001

Client Sample ID: 2291V-9-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chrysene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Dibenzo(a,h)anthracene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Dibenzofuran	NELAP	2.35	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Diethyl phthalate	NELAP	1.51	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Dimethyl phthalate	NELAP	1.43	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Di-n-butyl phthalate	NELAP	1.62	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Di-n-octyl phthalate	NELAP	1.63	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Fluoranthene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Fluorene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Hexachlorobenzene	NELAP	2.62	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Hexachlorobutadiene	NELAP	2.43	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Hexachlorocyclopentadiene	NELAP	1.60	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Hexachloroethane	NELAP	2.62	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Indeno(1,2,3-cd)pyrene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Isophorone	NELAP	1.85	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
m,p-Cresol	NELAP	1.98	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Naphthalene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Nitrobenzene	NELAP	1.96	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
N-Nitroso-di-n-propylamine	NELAP	1.72	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
N-Nitrosodiphenylamine	NELAP	1.44	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
o-Cresol	NELAP	1.85	7.84		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Pentachlorophenol	NELAP	10.3	31.4		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Phenanthrene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Phenol	NELAP	1.82	5.49		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Pyrene	NELAP	0.262	0.533		ND	mg/Kg-dry	5	02/07/2018 21:00	138762
Surr: 2,4,6-Tribromophenol	*	0	41.6-114	S	31.3	%REC	5	02/07/2018 21:00	138762
Surr: 2-Fluorobiphenyl	*	0	29.3-105		34.1	%REC	5	02/07/2018 21:00	138762
Surr: 2-Fluorophenol	*	0	35.8-97.2	S	28.2	%REC	5	02/07/2018 21:00	138762
Surr: Nitrobenzene-d5	*	0	36.2-95.2	S	28.7	%REC	5	02/07/2018 21:00	138762
Surr: Phenol-d5	*	0	38.8-103	S	31.4	%REC	5	02/07/2018 21:00	138762
Surr: p-Terphenyl-d14	*	0	43.2-116	S	36.8	%REC	5	02/07/2018 21:00	138762

Surrogate recovery is outside QC limits due to sample composition.

Elevated reporting limit due to sample composition.

<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
1,1,2,2-Tetrachloroethane	*	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
1,1,2-Trichloroethane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
1,1-Dichloroethane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
1,1-Dichloroethene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
1,2-Dichloroethane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
1,2-Dichloropropane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
2-Butanone	NELAP	0.132	0.265		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
2-Hexanone	NELAP	0.0106	0.0530		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
4-Methyl-2-pentanone	NELAP	0.0106	0.0530		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Acetone	NELAP	0.0175	0.0530		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Benzene	NELAP	0.00053	0.0011		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Bromodichloromethane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-001

Client Sample ID: 2291V-9-B01

Matrix: SOLID

Collection Date: 01/31/2018 13:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Bromomethane	NELAP	0.00265	0.0106		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Carbon disulfide	NELAP	0.00318	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Carbon tetrachloride	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Chlorobenzene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Chloroethane	NELAP	0.00212	0.0106		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Chloroform	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Chloromethane	NELAP	0.00212	0.0106		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
cis-1,2-Dichloroethene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
cis-1,3-Dichloropropene	NELAP	0.00106	0.0042		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Dibromochloromethane	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Ethylbenzene	NELAP	0.00106	0.0053	J	0.0019	mg/Kg-dry	1	02/05/2018 15:02	138724
Methyl tert-butyl ether	NELAP	0.00053	0.0021		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Methylene chloride	NELAP	0.00141	0.0106		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Styrene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Tetrachloroethene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Toluene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
trans-1,2-Dichloroethene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
trans-1,3-Dichloropropene	NELAP	0.00106	0.0042		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Trichloroethene	NELAP	0.00106	0.0053		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Vinyl acetate	NELAP	0.0212	0.0530		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Vinyl chloride	NELAP	0.00053	0.0021		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Xylenes, Total	NELAP	0.00106	0.0106	J	0.0029	mg/Kg-dry	1	02/05/2018 15:02	138724
1,3-Dichloropropene, Total	*	0.00106	0.0042		ND	mg/Kg-dry	1	02/05/2018 15:02	138724
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		98.2	%REC	1	02/05/2018 15:02	138724
Surr: 4-Bromofluorobenzene	*	0	82.1-116	S	120.0	%REC	1	02/05/2018 15:02	138724
Surr: Dibromofluoromethane	*	0	77.7-120		97.9	%REC	1	02/05/2018 15:02	138724
Surr: Toluene-d8	*	0	86-116		107.3	%REC	1	02/05/2018 15:02	138724

Surrogate recovery is outside control limits due to matrix interference.

LCS & LCSD recovered outside upper control limits for multiple compounds. Sample results are below the reporting limit. Data is reportable per the TNI Standard.



## Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-003

Client Sample ID: 2291V-9-B03

Matrix: SOLID

Collection Date: 01/31/2018 16:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		<b>21.0</b>	%	1	02/02/2018 16:12	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		<b>79.0</b>	%	1	02/02/2018 16:12	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.12	0.31	J	<b>0.19</b>	mg/Kg-dry	1	02/07/2018 17:52	138742
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		<b>8.18</b>		1	02/05/2018 15:36	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		<b>0.852</b>	mg/L	1	02/12/2018 16:38	138859
Lead	NELAP	0.0060	0.0070		<b>&lt; 0.0070</b>	mg/L	1	02/09/2018 15:32	138859
Manganese	NELAP	0.0016	0.0050		<b>0.0305</b>	mg/L	1	02/12/2018 16:38	138859
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250	J	<b>0.0139</b>	mg/L	1	02/06/2018 20:20	138715
Barium	NELAP	0.0200	0.0500		<b>0.258</b>	mg/L	1	02/06/2018 20:20	138715
Beryllium	NELAP	0.0003	0.0010		<b>0.0017</b>	mg/L	1	02/06/2018 20:20	138715
Boron	NELAP	1.00	2.00		<b>&lt; 2.00</b>	mg/L	1	02/06/2018 20:20	138715
Cadmium	NELAP	0.0005	0.0020		<b>&lt; 0.0020</b>	mg/L	1	02/06/2018 20:20	138715
Chromium	NELAP	0.0040	0.0100		<b>0.0363</b>	mg/L	1	02/06/2018 20:20	138715
Cobalt	NELAP	0.0022	0.0100	J	<b>0.0078</b>	mg/L	1	02/06/2018 20:20	138715
Iron	NELAP	0.0070	0.0200	X	<b>38.2</b>	mg/L	1	02/06/2018 20:20	138715
Lead	NELAP	0.0060	0.0070	X	<b>0.0171</b>	mg/L	1	02/06/2018 20:20	138715
Manganese	NELAP	0.0016	0.0050	X	<b>0.574</b>	mg/L	1	02/06/2018 20:20	138715
Nickel	NELAP	0.0033	0.0100		<b>0.0343</b>	mg/L	1	02/06/2018 20:20	138715
Selenium	NELAP	0.0220	0.0500		<b>&lt; 0.0500</b>	mg/L	1	02/06/2018 20:20	138715
Silver	NELAP	0.0015	0.0100		<b>&lt; 0.0100</b>	mg/L	1	02/06/2018 20:20	138715
Zinc	NELAP	0.0021	0.0100		<b>0.0789</b>	mg/L	1	02/06/2018 20:20	138715
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010	J	<b>0.0005</b>	mg/L	5	02/06/2018 19:11	138716
Thallium	NELAP	0.0005	0.0010		<b>&lt; 0.0010</b>	mg/L	5	02/06/2018 19:11	138716
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020	J	<b>0.00008</b>	mg/L	1	02/07/2018 11:45	138711
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.44	4.81		<b>&lt; 4.81</b>	mg/Kg-dry	1	02/05/2018 18:18	138659
Arsenic	NELAP	0.94	2.36	X	<b>12.6</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Barium	NELAP	0.09	0.24		<b>117</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Beryllium	NELAP	0.03	0.05		<b>1.07</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Boron	NELAP	0.47	1.89	J	<b>1.55</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Cadmium	NELAP	0.05	0.19		<b>&lt; 0.19</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Chromium	NELAP	0.19	0.47	X	<b>28.1</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Cobalt	NELAP	0.19	0.47		<b>12.5</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Copper	NELAP	0.14	0.47		<b>26.7</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Iron	NELAP	0.94	1.89	X	<b>31500</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Lead	NELAP	0.47	1.42		<b>22.7</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Magnesium	NELAP	0.38	4.72		<b>6740</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Manganese	NELAP	0.07	0.28	X	<b>958</b>	mg/Kg-dry	1	02/05/2018 22:19	138656
Nickel	NELAP	0.19	0.47		<b>29.0</b>	mg/Kg-dry	1	02/05/2018 22:19	138656



Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-003

Client Sample ID: 2291V-9-B03

Matrix: SOLID

Collection Date: 01/31/2018 16:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/05/2018 22:19	138656
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/05/2018 22:19	138656
Vanadium	NELAP	0.19	0.94		51.1	mg/Kg-dry	1	02/05/2018 22:19	138656
Zinc	NELAP	0.38	0.94		64.8	mg/Kg-dry	1	02/05/2018 22:19	138656
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94		< 0.94	mg/Kg-dry	10	02/06/2018 4:36	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.004	0.013		0.051	mg/Kg-dry	1	02/05/2018 12:50	138638
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.167	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
1,2-Dichlorobenzene	NELAP	0.200	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
1,3-Dichlorobenzene	NELAP	0.211	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
1,4-Dichlorobenzene	NELAP	0.200	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,4,5-Trichlorophenol	NELAP	0.138	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,4,6-Trichlorophenol	NELAP	0.158	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,4-Dichlorophenol	NELAP	0.152	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,4-Dimethylphenol	NELAP	0.160	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,4-Dinitrophenol	NELAP	0.135	1.26		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,4-Dinitrotoluene	NELAP	0.131	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2,6-Dinitrotoluene	NELAP	0.136	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2-Chloronaphthalene	NELAP	0.151	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2-Chlorophenol	NELAP	0.160	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2-Methylnaphthalene	NELAP	0.150	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2-Nitroaniline	NELAP	0.201	1.26		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
2-Nitrophenol	NELAP	0.141	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
3,3'-Dichlorobenzidine	NELAP	0.251	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
3-Nitroaniline	NELAP	0.189	1.26		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4,6-Dinitro-2-methylphenol	NELAP	0.136	1.26		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4-Bromophenyl phenyl ether	NELAP	0.116	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4-Chloro-3-methylphenol	NELAP	0.138	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4-Chloroaniline	NELAP	0.189	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4-Chlorophenyl phenyl ether	NELAP	0.124	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4-Nitroaniline	NELAP	0.189	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
4-Nitrophenol	NELAP	0.151	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Acenaphthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Acenaphthylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Benzo(a)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Benzo(a)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Benzo(b)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Benzo(g,h,i)perylene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Benzo(k)fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Bis(2-chloroethoxy)methane	NELAP	0.147	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Bis(2-chloroethyl)ether	NELAP	0.179	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Bis(2-chloroisopropyl)ether	NELAP	0.143	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Bis(2-ethylhexyl)phthalate	NELAP	0.147	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Butyl benzyl phthalate	NELAP	0.127	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-003

Client Sample ID: 2291V-9-B03

Matrix: SOLID

Collection Date: 01/31/2018 16:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Carbazole	NELAP	0.153	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Chrysene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Dibenzo(a,h)anthracene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Dibenzofuran	NELAP	0.189	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Diethyl phthalate	NELAP	0.121	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Dimethyl phthalate	NELAP	0.114	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Di-n-butyl phthalate	NELAP	0.129	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Di-n-octyl phthalate	NELAP	0.131	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Fluoranthene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Fluorene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Hexachlorobenzene	NELAP	0.210	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Hexachlorobutadiene	NELAP	0.195	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Hexachlorocyclopentadiene	NELAP	0.128	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Hexachloroethane	NELAP	0.210	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Indeno(1,2,3-cd)pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Isophorone	NELAP	0.148	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
m,p-Cresol	NELAP	0.158	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Naphthalene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Nitrobenzene	NELAP	0.157	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
N-Nitroso-di-n-propylamine	NELAP	0.138	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
N-Nitrosodiphenylamine	NELAP	0.116	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
o-Cresol	NELAP	0.148	0.629		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Pentachlorophenol	NELAP	0.830	2.51		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Phenanthrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Phenol	NELAP	0.146	0.440		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Pyrene	NELAP	0.021	0.043		ND	mg/Kg-dry	1	02/08/2018 17:18	138790
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		84.4	%REC	1	02/08/2018 17:18	138790
Surr: 2-Fluorobiphenyl	*	0	29.3-105		65.0	%REC	1	02/08/2018 17:18	138790
Surr: 2-Fluorophenol	*	0	35.8-97.2		66.8	%REC	1	02/08/2018 17:18	138790
Surr: Nitrobenzene-d5	*	0	36.2-95.2		62.2	%REC	1	02/08/2018 17:18	138790
Surr: Phenol-d5	*	0	38.8-103		67.3	%REC	1	02/08/2018 17:18	138790
Surr: p-Terphenyl-d14	*	0	43.2-116		88.2	%REC	1	02/08/2018 17:18	138790
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,1,2,2-Tetrachloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,1,2-Trichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,1-Dichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,1-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,2-Dichloroethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,2-Dichloropropane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
1,3-Dichloropropene, Total	*	0.00095	0.0038		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
2-Butanone	NELAP	0.119	0.191		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
2-Hexanone	NELAP	0.00954	0.0477		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
4-Methyl-2-pentanone	NELAP	0.00954	0.0477		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Acetone	NELAP	0.0157	0.0477		0.0707	mg/Kg-dry	1	02/04/2018 21:46	138669
Benzene	NELAP	0.00048	0.0010		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Bromodichloromethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669



## Laboratory Results

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Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-003

Client Sample ID: 2291V-9-B03

Matrix: SOLID

Collection Date: 01/31/2018 16:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Bromomethane	NELAP	0.00238	0.0095		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Carbon disulfide	NELAP	0.00286	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Carbon tetrachloride	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Chlorobenzene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Chloroethane	NELAP	0.00191	0.0095		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Chloroform	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Chloromethane	NELAP	0.00191	0.0095		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
cis-1,2-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
cis-1,3-Dichloropropene	NELAP	0.00095	0.0038		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Dibromochloromethane	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Ethylbenzene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
m,p-Xylenes	NELAP	0.00191	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Methyl tert-butyl ether	NELAP	0.00048	0.0019		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Methylene chloride	NELAP	0.00127	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
o-Xylene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Styrene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Tetrachloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Toluene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
trans-1,2-Dichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
trans-1,3-Dichloropropene	NELAP	0.00095	0.0038		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Trichloroethene	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Vinyl acetate	NELAP	0.0191	0.0477		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Vinyl chloride	NELAP	0.00048	0.0019		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Xylenes, Total	NELAP	0.00095	0.0048		ND	mg/Kg-dry	1	02/04/2018 21:46	138669
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		<b>112.7</b>	%REC	1	02/04/2018 21:46	138669
Surr: 4-Bromofluorobenzene	*	0	82.1-116		<b>100.9</b>	%REC	1	02/04/2018 21:46	138669
Surr: Dibromofluoromethane	*	0	77.7-120		<b>104.4</b>	%REC	1	02/04/2018 21:46	138669
Surr: Toluene-d8	*	0	86-116		<b>94.7</b>	%REC	1	02/04/2018 21:46	138669

*Allowable Marginal Exceedance of 1,1,2-trichloroethane in the laboratory control sample is verified per the TNI Standard.*

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-004

Client Sample ID: 2291V-9-B04

Matrix: SOLID

Collection Date: 01/31/2018 16:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA SW846 3550C, 5035A, ASTM D2974</b>									
Percent Moisture	*	0.1	0.1		24.5	%	1	02/02/2018 16:16	R243111
<b>STANDARD METHODS 2540 G 1997</b>									
Total Solids	*	0.1	0.1		75.5	%	1	02/02/2018 16:16	R243111
<b>SW-846 9012A (TOTAL)</b>									
Cyanide	NELAP	0.13	0.32		0.32	mg/Kg-dry	1	02/08/2018 11:39	138793
<b>SW-846 9045C</b>									
pH (1:1)	NELAP	0	1.00		7.55		1	02/05/2018 15:40	R243146
<b>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</b>									
Iron	NELAP	0.0070	0.0200		0.923	mg/L	1	02/12/2018 16:42	138859
Manganese	NELAP	0.0016	0.0050		0.0282	mg/L	1	02/12/2018 16:42	138859
<b>SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP</b>									
Arsenic	NELAP	0.0100	0.0250		< 0.0250	mg/L	1	02/06/2018 20:23	138715
Barium	NELAP	0.0200	0.0500		0.130	mg/L	1	02/06/2018 20:23	138715
Beryllium	NELAP	0.0003	0.0010	J	0.0005	mg/L	1	02/06/2018 20:23	138715
Boron	NELAP	1.00	2.00		< 2.00	mg/L	1	02/06/2018 20:23	138715
Cadmium	NELAP	0.0005	0.0020		< 0.0020	mg/L	1	02/06/2018 20:23	138715
Chromium	NELAP	0.0040	0.0100		0.0110	mg/L	1	02/06/2018 20:23	138715
Cobalt	NELAP	0.0022	0.0100		< 0.0100	mg/L	1	02/06/2018 20:23	138715
Iron	NELAP	0.0070	0.0200	X	9.60	mg/L	1	02/06/2018 20:23	138715
Lead	NELAP	0.0060	0.0070		< 0.0070	mg/L	1	02/06/2018 20:23	138715
Manganese	NELAP	0.0016	0.0050	X	0.184	mg/L	1	02/06/2018 20:23	138715
Nickel	NELAP	0.0033	0.0100	J	0.0084	mg/L	1	02/06/2018 20:23	138715
Selenium	NELAP	0.0220	0.0500		< 0.0500	mg/L	1	02/06/2018 20:23	138715
Silver	NELAP	0.0015	0.0100		< 0.0100	mg/L	1	02/06/2018 20:23	138715
Zinc	NELAP	0.0021	0.0100		0.0300	mg/L	1	02/06/2018 20:23	138715
<b>SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS</b>									
Antimony	NELAP	0.0002	0.0010		< 0.0010	mg/L	5	02/06/2018 19:19	138716
Thallium	NELAP	0.0005	0.0010		< 0.0010	mg/L	5	02/06/2018 19:19	138716
<b>SW-846 1312, 7470A IN SPLP EXTRACT</b>									
Mercury	NELAP	0.00005	0.00020		< 0.00020	mg/L	1	02/07/2018 11:47	138711
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Antimony	NELAP	1.36	4.55		< 4.55	mg/Kg-dry	1	02/05/2018 18:23	138659
Arsenic	NELAP	0.94	2.36		9.12	mg/Kg-dry	1	02/05/2018 22:25	138656
Barium	NELAP	0.09	0.24		304	mg/Kg-dry	1	02/05/2018 22:25	138656
Beryllium	NELAP	0.03	0.05		0.87	mg/Kg-dry	1	02/05/2018 22:25	138656
Boron	NELAP	0.47	1.89		2.24	mg/Kg-dry	1	02/05/2018 22:25	138656
Cadmium	NELAP	0.05	0.19		0.21	mg/Kg-dry	1	02/05/2018 22:25	138656
Chromium	NELAP	0.19	0.47	X	23.0	mg/Kg-dry	1	02/05/2018 22:25	138656
Cobalt	NELAP	0.19	0.47		9.89	mg/Kg-dry	1	02/05/2018 22:25	138656
Copper	NELAP	0.14	0.47		21.1	mg/Kg-dry	1	02/05/2018 22:25	138656
Iron	NELAP	0.94	1.89	X	25000	mg/Kg-dry	1	02/05/2018 22:25	138656
Lead	NELAP	0.47	1.42		23.6	mg/Kg-dry	1	02/05/2018 22:25	138656
Magnesium	NELAP	0.38	4.72		4000	mg/Kg-dry	1	02/05/2018 22:25	138656
Manganese	NELAP	0.07	0.28	X	1490	mg/Kg-dry	1	02/05/2018 22:25	138656
Nickel	NELAP	0.19	0.47		21.7	mg/Kg-dry	1	02/05/2018 22:25	138656
Silver	NELAP	0.14	0.47		< 0.47	mg/Kg-dry	1	02/05/2018 22:25	138656

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-004

Client Sample ID: 2291V-9-B04

Matrix: SOLID

Collection Date: 01/31/2018 16:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3050B, 6010B, METALS BY ICP</b>									
Thallium	NELAP	1.42	2.45		< 2.45	mg/Kg-dry	1	02/05/2018 22:25	138656
Vanadium	NELAP	0.19	0.94		38.9	mg/Kg-dry	1	02/05/2018 22:25	138656
Zinc	NELAP	0.38	0.94		84.6	mg/Kg-dry	1	02/05/2018 22:25	138656
<b>SW-846 3050B, 6020A, METALS BY ICPMS</b>									
Selenium	NELAP	0.38	0.94	J	0.39	mg/Kg-dry	10	02/06/2018 4:44	138657
<b>SW-846 7471B</b>									
Mercury	NELAP	0.004	0.013		0.047	mg/Kg-dry	1	02/05/2018 13:22	138638
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,2,4-Trichlorobenzene	NELAP	0.494	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
1,2-Dichlorobenzene	NELAP	0.591	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
1,3-Dichlorobenzene	NELAP	0.624	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
1,4-Dichlorobenzene	NELAP	0.591	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,4,5-Trichlorophenol	NELAP	0.409	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,4,6-Trichlorophenol	NELAP	0.468	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,4-Dichlorophenol	NELAP	0.450	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,4-Dimethylphenol	NELAP	0.472	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,4-Dinitrophenol	NELAP	0.398	3.72		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,4-Dinitrotoluene	NELAP	0.386	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2,6-Dinitrotoluene	NELAP	0.401	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2-Chloronaphthalene	NELAP	0.446	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2-Chlorophenol	NELAP	0.472	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2-Methylnaphthalene	NELAP	0.442	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2-Nitroaniline	NELAP	0.594	3.72		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
2-Nitrophenol	NELAP	0.416	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
3,3'-Dichlorobenzidine	NELAP	0.743	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
3-Nitroaniline	NELAP	0.557	3.72		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4,6-Dinitro-2-methylphenol	NELAP	0.401	3.72		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4-Bromophenyl phenyl ether	NELAP	0.342	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4-Chloro-3-methylphenol	NELAP	0.409	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4-Chloroaniline	NELAP	0.557	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4-Chlorophenyl phenyl ether	NELAP	0.368	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4-Nitroaniline	NELAP	0.557	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
4-Nitrophenol	NELAP	0.446	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Acenaphthene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Acenaphthylene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Anthracene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Benzo(a)anthracene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Benzo(a)pyrene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Benzo(b)fluoranthene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Benzo(g,h,i)perylene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Benzo(k)fluoranthene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Bis(2-chloroethoxy)methane	NELAP	0.435	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Bis(2-chloroethyl)ether	NELAP	0.528	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Bis(2-chloroisopropyl)ether	NELAP	0.424	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Bis(2-ethylhexyl)phthalate	NELAP	0.435	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Butyl benzyl phthalate	NELAP	0.375	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Carbazole	NELAP	0.453	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-004

Client Sample ID: 2291V-9-B04

Matrix: SOLID

Collection Date: 01/31/2018 16:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3550B, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Chrysene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Dibenzo(a,h)anthracene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Dibenzofuran	NELAP	0.557	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Diethyl phthalate	NELAP	0.357	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Dimethyl phthalate	NELAP	0.338	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Di-n-butyl phthalate	NELAP	0.383	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Di-n-octyl phthalate	NELAP	0.386	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Fluoranthene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Fluorene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Hexachlorobenzene	NELAP	0.620	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Hexachlorobutadiene	NELAP	0.576	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Hexachlorocyclopentadiene	NELAP	0.379	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Hexachloroethane	NELAP	0.620	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Indeno(1,2,3-cd)pyrene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Isophorone	NELAP	0.438	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
m,p-Cresol	NELAP	0.468	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Naphthalene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Nitrobenzene	NELAP	0.464	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
N-Nitroso-di-n-propylamine	NELAP	0.409	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
N-Nitrosodiphenylamine	NELAP	0.342	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
o-Cresol	NELAP	0.438	1.86		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Pentachlorophenol	NELAP	2.45	7.43		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Phenanthrene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Phenol	NELAP	0.431	1.30		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Pyrene	NELAP	0.062	0.126		ND	mg/Kg-dry	1	02/09/2018 10:35	138790
Surr: 2,4,6-Tribromophenol	*	0	41.6-114		74.8	%REC	1	02/09/2018 10:35	138790
Surr: 2-Fluorobiphenyl	*	0	29.3-105		54.5	%REC	1	02/09/2018 10:35	138790
Surr: 2-Fluorophenol	*	0	35.8-97.2		54.2	%REC	1	02/09/2018 10:35	138790
Surr: Nitrobenzene-d5	*	0	36.2-95.2		55.5	%REC	1	02/09/2018 10:35	138790
Surr: Phenol-d5	*	0	38.8-103		56.6	%REC	1	02/09/2018 10:35	138790
Surr: p-Terphenyl-d14	*	0	43.2-116		76.2	%REC	1	02/09/2018 10:35	138790

*Elevated reporting limit due to sample composition.*

<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
1,1,1-Trichloroethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,1,2,2-Tetrachloroethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,1,2-Trichloroethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,1-Dichloroethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,1-Dichloroethene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,2-Dichloroethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,2-Dichloropropane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
1,3-Dichloropropene, Total	*	0.00109	0.0044		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
2-Butanone	NELAP	0.137	0.219		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
2-Hexanone	NELAP	0.0109	0.0547		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
4-Methyl-2-pentanone	NELAP	0.0109	0.0547		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Acetone	NELAP	0.0180	0.0547		0.199	mg/Kg-dry	1	02/05/2018 15:28	138724
Benzene	NELAP	0.00055	0.0011		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Bromodichloromethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724



# Laboratory Results

<http://www.teklabinc.com/>

Client: Andrews Engineering, Inc.

Work Order: 18020048

Client Project: IL 173 McHenry Co PTB 184-006, 01A AE7-01A

Report Date: 22-Feb-18

Lab ID: 18020048-004

Client Sample ID: 2291V-9-B04

Matrix: SOLID

Collection Date: 01/31/2018 16:10

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5035, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>									
Bromoform	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Bromomethane	NELAP	0.00273	0.0109		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Carbon disulfide	NELAP	0.00328	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Carbon tetrachloride	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Chlorobenzene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Chloroethane	NELAP	0.00219	0.0109		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Chloroform	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Chloromethane	NELAP	0.00219	0.0109		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
cis-1,2-Dichloroethene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
cis-1,3-Dichloropropene	NELAP	0.00109	0.0044		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Dibromochloromethane	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Ethylbenzene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
m,p-Xylenes	NELAP	0.00219	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Methyl tert-butyl ether	NELAP	0.00055	0.0022		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Methylene chloride	NELAP	0.00145	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
o-Xylene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Styrene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Tetrachloroethene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Toluene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
trans-1,2-Dichloroethene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
trans-1,3-Dichloropropene	NELAP	0.00109	0.0044		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Trichloroethene	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Vinyl acetate	NELAP	0.0219	0.0547		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Vinyl chloride	NELAP	0.00055	0.0022		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Xylenes, Total	NELAP	0.00109	0.0055		ND	mg/Kg-dry	1	02/05/2018 15:28	138724
Surr: 1,2-Dichloroethane-d4	*	0	72.2-131		112.4	%REC	1	02/05/2018 15:28	138724
Surr: 4-Bromofluorobenzene	*	0	82.1-116		111.8	%REC	1	02/05/2018 15:28	138724
Surr: Dibromofluoromethane	*	0	77.7-120		103.6	%REC	1	02/05/2018 15:28	138724
Surr: Toluene-d8	*	0	86-116		104.9	%REC	1	02/05/2018 15:28	138724

LCS & LCSD recovered outside upper control limits for multiple compounds. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

## CHAIN OF CUSTODY RECORD

<b>Client Contact</b> Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com					<b>Laboratory</b> Lab: TekLab, Inc. Address: <b>5445 Horseshoe Lake Road</b> <b>Collinsville, IL 62234</b> Phone: <b>877-344-1003</b> Contact: <b>Shelly Hennessy</b> email: shennessy@teklabinc.com					Project Name: <u>IL 173 McHenry Co</u> Project No.: <u>PTB 184-006, 01A AE 7-01A</u> TAT: <input checked="" type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other Sampler: <u>Aneasha V.</u>					COC No.: <u>4</u> of <u>4</u> Lab Job No.: <u>18020048</u> Sample Temp: <u>2.22 °C</u>	
<b>Special Instructions:</b> See Table 2 for complete parameter lists and minimum reporting limits. * If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal. ** If SPLP result exceeds Class I Standard, run TCLP for that specific parameter.					<b>ANALYSES</b>										<b>Matrix Key:</b> W: Water S: Soil SL: Sludge S: Sediment L: Leachate DW: Drinking Water OL: Oil O: Other	
Lab ID	Sample ID	Sample Date	Sample Time	Matrix	VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP** TCLP Metals	pH	% Solids	Waste Characterization	Comments
18020048-001	2291V-9-B01	1/31/18	1345	S	X	X					X	X	X	X	X	
-002	2291V-9-B02	1/31/18	1355													
-003	2291V-9-B03	1/31/18	1600													
-004	2291V-9-B04	1/31/18	1610													
-005	2291V-9-B05	1/31/18	1620													
-006	2291V-9-B05 Dup	1/31/18	1625	✓	✓	✓					✓	✓	✓	✓	✓	
-007	Trip Blank 4	1/31/18	1625		X											
Relinquished by: <u>[Signature]</u>					Date/Time: <u>2/1/18 0800</u>			Received by: <u>[Signature]</u>					Date/Time: <u>2/1/18 11:50</u>			
Relinquished by: <u>[Signature]</u>					Date/Time: <u>2/1/18 16:40</u>			Received by: <u>[Signature]</u>					Date/Time: <u>2/1/18 10:50</u>			
Relinquished by:					Date/Time:			Received by:					Date/Time:			



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 500-145720-5  
Client Project/Site: IDOT - AE7-01

For:  
Andrews Engineering Inc.  
3300 Ginger Creek Drive  
Springfield, Illinois 62711

Attn: Ms. Colleen Grey



Authorized for release by:  
6/5/2018 8:13:59 AM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-5

**Client Sample ID: 2291V-9-B01**

**Lab Sample ID: 500-145720-9**

**Date Collected: 05/18/18 11:00**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 81.8**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,4-Dinitrophenol	<0.81		0.81	0.70	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2-Methylnaphthalene	<0.081		0.081	0.0073	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
2-Nitrophenol	<0.40		0.40	0.094	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Anthracene	<0.040		0.040	0.0067	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Benzo[a]anthracene</b>	<b>0.017</b>	<b>J</b>	0.040	0.0054	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Benzo[a]pyrene</b>	<b>0.024</b>	<b>J</b>	0.040	0.0077	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Benzo[b]fluoranthene	<0.040		0.040	0.0086	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Benzo[g,h,i]perylene	<0.040		0.040	0.013	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Benzo[k]fluoranthene	<0.040		0.040	0.012	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Carbazole</b>	<b>0.12</b>	<b>J</b>	0.20	0.10	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Chrysene</b>	<b>0.025</b>	<b>J</b>	0.040	0.011	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0077	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Fluoranthene</b>	<b>0.035</b>	<b>J</b>	0.040	0.0074	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1

TestAmerica Chicago

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-5

**Client Sample ID: 2291V-9-B01**

**Lab Sample ID: 500-145720-9**

**Date Collected: 05/18/18 11:00**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 81.8**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.040		0.040	0.0056	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.016</b>	<b>J</b>	0.040	0.010	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Naphthalene	<0.040		0.040	0.0061	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Pentachlorophenol	<0.81		0.81	0.64	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Phenanthrene</b>	<b>0.013</b>	<b>J</b>	0.040	0.0056	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
Phenol	<0.20		0.20	0.089	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1
<b>Pyrene</b>	<b>0.033</b>	<b>J</b>	0.040	0.0079	mg/Kg	☼	05/29/18 07:40	06/01/18 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	45		25 - 139	05/29/18 07:40	06/01/18 18:22	1
2-Fluorobiphenyl	60		44 - 121	05/29/18 07:40	06/01/18 18:22	1
2-Fluorophenol	75		46 - 133	05/29/18 07:40	06/01/18 18:22	1
Nitrobenzene-d5	56		41 - 120	05/29/18 07:40	06/01/18 18:22	1
Phenol-d5	50		46 - 125	05/29/18 07:40	06/01/18 18:22	1
Terphenyl-d14	79		35 - 160	05/29/18 07:40	06/01/18 18:22	1

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-5

**Client Sample ID: 2291V-9-B04**

**Lab Sample ID: 500-145720-10**

**Date Collected: 05/18/18 11:15**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 81.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2-Methylnaphthalene	<0.079		0.079	0.0072	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Anthracene	<0.039		0.039	0.0066	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Benzo[a]anthracene	<0.039		0.039	0.0053	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Benzo[a]pyrene	<0.039		0.039	0.0076	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
<b>Benzo[b]fluoranthene</b>	<b>0.011</b>	<b>J</b>	0.039	0.0085	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Benzo[g,h,i]perylene	<0.039		0.039	0.013	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
<b>Chrysene</b>	<b>0.011</b>	<b>J</b>	0.039	0.011	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
<b>Fluoranthene</b>	<b>0.012</b>	<b>J</b>	0.039	0.0073	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1

TestAmerica Chicago

# Client Sample Results

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-5

**Client Sample ID: 2291V-9-B04**

**Lab Sample ID: 500-145720-10**

**Date Collected: 05/18/18 11:15**

**Matrix: Solid**

**Date Received: 05/18/18 18:20**

**Percent Solids: 81.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Indeno[1,2,3-cd]pyrene	<0.039		0.039	0.010	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
<b>Phenanthrene</b>	<b>0.0077</b>	<b>J</b>	0.039	0.0055	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1
<b>Pyrene</b>	<b>0.016</b>	<b>J</b>	0.039	0.0078	mg/Kg	☼	05/29/18 07:40	06/01/18 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	41		25 - 139	05/29/18 07:40	06/01/18 18:50	1
2-Fluorobiphenyl	57		44 - 121	05/29/18 07:40	06/01/18 18:50	1
2-Fluorophenol	73		46 - 133	05/29/18 07:40	06/01/18 18:50	1
Nitrobenzene-d5	56		41 - 120	05/29/18 07:40	06/01/18 18:50	1
Phenol-d5	39	X	46 - 125	05/29/18 07:40	06/01/18 18:50	1
Terphenyl-d14	76		35 - 160	05/29/18 07:40	06/01/18 18:50	1

# Definitions/Glossary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-5

## Qualifiers

### GC/MS Semi VOA

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

## Glossary

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

# Accreditation/Certification Summary

Client: Andrews Engineering Inc.  
Project/Site: IDOT - AE7-01

TestAmerica Job ID: 500-145720-5

## Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

## CHAIN OF CUSTODY RECORD

<b>Client Contact</b>	<b>Laboratory</b>	Project Name: <u>IL 173, MCHENRY CO</u>	COC No.: <u>1 of 1</u>
Andrews Engineering, Inc. 3300 Ginger Creek Drive Springfield, IL 62711 217-787-2334 Contact: Colleen Grey email: cgrey@andrews-eng.com	Lab: <b>Test America - Chicago</b> Address: <b>2417 Bond Street</b> <b>University Park, IL 60484</b> Phone: <b>708-534-5200</b> Contact: <b>Dick Wright</b> email: richard.wright@testamericainc.com	Project No.: <u>PTB 184-006 / AET-01A</u> TAT: <input type="checkbox"/> 15 BD <input checked="" type="checkbox"/> 10 BD <input type="checkbox"/> 5 BD <input type="checkbox"/> 2 BD <input type="checkbox"/> Other	Lab Job No.: <u>500-145720</u>
<b>Special Instructions:</b> See Table 2 for complete parameter lists and minimum reporting limits. * If Total RCRA metal (mg/kg) result exceeds the Soil Toxicity Characteristics Limit (Table 3), run TCLP for that specific RCRA metal. ** If SPLP result exceeds Class I Standard, run TCLP for that specific parameter. *** If total cyanide exceeds Class I Standard, run ASTM D3987 (Neutral Leach) cyanide.			Sample Temp: <u>4.6</u>
		<b>Analyses</b>	<b>Matrix Key:</b> W: Water S: Soil SL: Sludge S: Sediment L: Leachate DW: Drinking Water OL: Oil O: Other

Lab ID	Sample ID	Sample Date	Sample Time	Matrix	ANALYSES												Comments	
					VOCs	SVOCs	BETX & MTBE	PNAs	Pesticides	PCBs	* Total Metals	SPLP/** TCLP Metals	*** Cyanide	pH	% Solids	Waste Characterization		
9	291V-9-1301	5-18-18	1100	S		X												
10	291V-9-1304	5-18-18	1115	↓		X												
11	291V-9-1305	5-18-18	1120	↓		X												
12	291V-9-1305 DUP	5-18-18	1125	↓		X												

Relinquished by: <u>[Signature]</u>	Date/Time: <u>5/18/18 - 1300</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5-18-18 1600</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>5-18-18 1820</u>	Received by: <u>[Signature]</u>	Date/Time: <u>05/18/18 1820</u>
Relinquished by:	Date/Time:	Received by:	Date/Time: