Appendix E: Uncontaminated Soil Certification Forms

Illinois Environmental Protection Agency

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

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663 Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

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

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

I. Source Location Information

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

Project Name: FAU 2721 (Kean Ave.) Office Phone Number, if available:

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

Southwest Alliance Church, 9801-9999 block of South Kean Avenue (ISGS #3019-4)

City: Palos Hills State: IL Zip Code: 60465

County: Cook Township: Palos

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

Latitude: 41.703739 (Decimal Degrees) Longitude: -87.846383 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

Google Earth

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

II. Owner/Operator Information for Source Site

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

Project Name: FAU 2721 (Kean Ave.)

Latitude: 41.703739 Longitude: -87.846383

Uncontaminated Site Certification

III. Basis for Certification and Attachments

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

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

LOCATIONS 3019-1-B04 AND 3019-1-B05 WERE SAMPLED AT SITE 3019-1. SEE FIGURES 4-1 AND 4-2 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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]:

PACE ANALYTICAL REPORT JOB ID: 40162435.
ALSO SEE ATTACHED DATA SUMMARY TABLE.

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

I, Andrew Dorn, P.E. (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: Environmental Design International

Street Address: 33 West Monroe, Suite 1825

City: Chicago State: IL Zip Code: 60603

Phone: (312) 345-1400

Andrew Dorn, P.E.
Printed Name:

Licensed Professional Engineer or Licensed Professional Geologist Signature:

11/22/18
Date:

LICENSED PROFESSIONAL ENGINEER
ANDREW D. DORN
062.067314
STATE OF ILLINOIS

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

Summary Table of ISGS Site No. 3019-1
PTB #176-001: Work Order 034A - IDOT Job #D-91-339-15

SITE	ISGS #3019-1 (Cook County Forest Preserve)			Comparison Criteria					
BORING	3019-1-B04	3019-1-B05		MACs			TACO		
SAMPLE	3019-01-B04 (0-1')	3019-01-B05 (0-7')	3019-01-B05 (7-14')	Most Stringent	Within a MSA	Within Chciago Corporate Limits	Resdential	Construction Worker	SCGIER
MATRIX	Soil	Soil	Soil						
DEPTH (feet)	0-1	0-7	7-14						
pH	8.71	8.54	7.51						
HEADSPACE (MU)	0.0	0.0							
VOCs (mg/kg)									
Acetone	0.061	0.16	0.047	25	25	25	70,000	100,000	--
SVOCs (mg/kg)									
Benzo(a)anthracene	0.092J	0.038J	ND	0.9	1.8	1.1	0.9	170	--
Benzo(a)pyrene	0.13 †	ND	ND	0.09	2.1	1.3	0.09	17	--
Benzo(b)fluoranthene	0.19	0.039J	ND	0.9	2.1	1.5	0.9	170	--
Benzo(g,h,i)perylene	0.13J	ND	ND	--	--	--	--	--	--
Benzo(k)fluoranthene	0.066J	ND	ND	9	9	9	9	1,700	--
Chrysene	0.13	0.038J	ND	88	88	88	88	17,000	--
Fluoranthene	0.25	0.068J	ND	3,100	3,100	3,100	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	0.11J	ND	ND	0.9	1.6	0.9	0.9	170	--
Phenanthrene	0.087	0.035J	ND	--	--	--	--	--	--
Pyrene	0.19	0.054J	ND	2,300	2,300	2,300	2,300	61,000	--
Inorganics (mg/kg)									
Antimony	ND	ND	ND	5	5	--	31	82	--
Arsenic	3.6J	10.8	7.1	11.3	13	--	750	61	--
Barium	31.3	56.9	47.0	1,500	1,500	--	5,500	14,000	--
Beryllium	0.15J	0.65	0.74	22	22	--	160	410	--
Boron	21.7	14.9	25.2	40	40	--	16,000	41,000	--
Cadmium	0.30J	0.55	0.27J	5.2	5.2	--	78	200	--
Calcium	155,000	20,300	44,000	--	--	--	--	--	--
Chromium	10.4	17.8	21.9 †	21	21	--	230	690	--
Cobalt	2.6	10.5	14.1	20	20	--	4,700	12,000	--
Copper	9.3	30.7	29.9	2,900	2,900	--	2,900	8,200	--
Iron	6,400	20,900 †,m	24,700 †,m	15000	15,900	--	--	--	--
Lead	46.9	25.0	16.7	107	107	--	400	700	--
Magnesium	84,200	14,200	26,700	325,000	325,000	--	325,000	730,000	--
Manganese	257	338	443	630	636	--	1,600	4,100	--
Mercury	<0.012	0.038	<0.012	0.1	0.1	--	10	0.1	--
Nickel	6.9	25.7	33.6	100	100	--	1,600	4,100	--
Potassium	1,140	2,600	4,290	--	--	--	--	--	--
Selenium	ND	ND	ND	1.3	1.3	--	390	1,000	--
Sodium	303	1,120	572	--	--	--	--	--	--
Thallium	ND	ND	ND	2.6	2.6	--	6.3	160	--
Vanadium	10.8	25.5	27.3	550	550	--	550	1,400	--
Zinc	59.8	81.4	63.5	5,100	5,100	--	23,000	61,000	--
TCLP Metals (mg/L)									
Antimony	ND ‡	ND ‡	ND ‡	--	--	--	--	--	0.006
Barium	0.46	0.47	0.53	--	--	--	--	--	2
Beryllium	ND	ND	ND	--	--	--	--	--	0.004
Boron	0.13J	0.093J	0.058J	--	--	--	--	--	2
Cadmium	0.0041J	0.0026J	0.0017J	--	--	--	--	--	0.005
Chromium	ND	ND	ND	--	--	--	--	--	0.1
Cobalt	ND	0.039	0.029	--	--	--	--	--	1
Iron	ND	0.043J	0.11	--	--	--	--	--	5
Lead	0.0093J L	0.0083J L	0.0053J	--	--	--	--	--	0.0075
Manganese	1.0 L	3.9 L	5.2 L	--	--	--	--	--	0.15
Mercury	ND	ND	ND	--	--	--	--	--	0.01
Nickel	0.014	0.033	0.032	--	--	--	--	--	0.1
Selenium	ND	ND	ND	--	--	--	--	--	0.05
Thallium	ND ‡	ND ‡	ND ‡	--	--	--	--	--	0.002
Zinc	0.10	0.048	0.032J	--	--	--	--	--	5
SPLP Metals (mg/L)									
Lead	0.053 L	0.34 L	NA	--	--	--	--	--	0.0075
Manganese	0.19 L	1.3 L	0.046	--	--	--	--	--	0.15

Notes:

-- Not Applicable (Comp
pH is less than 6.25 or
† Concentration exceeds the most stringent MAC (or the only MAC for COCs with only one)
* Concentration exceeds the MAC for Chicago corporate limits
m Concentration exceeds the MAC for an MSA
r Concentration exceeds a TACO Tier 1 soil RO for residenital properties
c Concentration exceeds a TACO Tier 1 RO for the Construction Worker Exposure Route
L The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER
MAC Maximum Allowable Concentrtaions of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations

J Estimated Value
NA Analyte was not analyzed
ND Analyte was not detected above the method detection limit
‡ Detection limit was above reference concentrations
MSA Metropolitan Statistical Area
SCGIER Soil Component of the Groundwater Ingestion Exposure Route
Concentration exceeds applicable comparison criteria
Concentration exceeds the most stringent MAC, but is below the MAC for an MSA

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 04, 2018

Nick Szymanski
Environmental Design International
33 West Monroe
Suite 1825
Chicago, IL 60603

RE: Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Dear Nick Szymanski:
Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REVISED REPORT: SPLP Metals have been added.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40162435001	3019-01-B01 (0-7')	Solid	12/13/17 10:00	12/14/17 09:45
40162435002	3019-01-B01-D (0-7')	Solid	12/13/17 10:00	12/14/17 09:45
40162435003	3019-01-BO1 (7-14')	Solid	12/13/17 10:05	12/14/17 09:45
40162435004	3019-01-B02 (0-7')	Solid	12/13/17 09:20	12/14/17 09:45
40162435005	3019-01-B02 (7-14')	Solid	12/13/17 09:25	12/14/17 09:45
40162435006	3019-01-B03 (0-1')	Solid	12/13/17 09:35	12/14/17 09:45
40162435007	3019-01-B04 (0-1')	Solid	12/13/17 10:20	12/14/17 09:45
40162435008	3019-01-B05 (0-7')	Solid	12/13/17 12:30	12/14/17 09:45
40162435009	3019-01-B05 (7-14')	Solid	12/13/17 12:35	12/14/17 09:45
40162435010	3019-01-B06 (0-1')	Solid	12/13/17 12:05	12/14/17 09:45
40162435011	3019-01-B07 (0-1')	Solid	12/13/17 12:45	12/14/17 09:45
40162435012	3019-04-B01 (0-4)	Solid	12/13/17 11:25	12/14/17 09:45
40162435013	3019-04-B02 (0-4)	Solid	12/13/17 11:15	12/14/17 09:45
40162435014	3019-05-B01 (0-7)	Solid	12/13/17 11:40	12/14/17 09:45
40162435015	3019-05-B01-D (0-7)	Solid	12/13/17 11:40	12/14/17 09:45
40162435016	3019-05-B01 (7-10')	Solid	12/13/17 11:45	12/14/17 09:45
40162435017	3019-05-B02 (0-1)	Solid	12/13/17 11:55	12/14/17 09:45

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SAMPLE ANALYTE COUNT

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	DXS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435006	**3019-01-B03 (0-1')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	3	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	DXS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435007	**3019-01-B04 (0-1')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	DXS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435008	**3019-01-B05 (0-7')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	DXS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435009	**3019-01-B05 (7-14')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	DXS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435010	**3019-01-B06 (0-1')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435011	**3019-01-B07 (0-1')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435012	**3019-04-B01 (0-4)**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435013	**3019-04-B02 (0-4)**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G

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SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435006	**3019-01-B03 (0-1')**					
EPA 6010	Sodium	439	mg/kg	55.9	12/19/17 11:54	
EPA 6010	Vanadium	20.7	mg/kg	1.1	12/19/17 11:54	
EPA 6010	Zinc	162	mg/kg	4.5	12/19/17 11:54	
EPA 6010	Cadmium	0.0051	mg/L	0.0050	01/03/18 12:21	
EPA 6010	Lead	0.32	mg/L	0.013	01/03/18 12:21	
EPA 6010	Manganese	0.49	mg/L	0.0055	01/03/18 12:21	
EPA 6010	Barium	0.16	mg/L	0.015	12/20/17 12:53	
EPA 6010	Boron	0.079J	mg/L	0.15	12/20/17 12:53	
EPA 6010	Cadmium	0.010	mg/L	0.0050	12/20/17 12:53	
EPA 6010	Lead	0.030	mg/L	0.013	12/20/17 12:53	2q
EPA 6010	Manganese	0.32	mg/L	0.0055	12/20/17 12:53	
EPA 6010	Nickel	0.0080J	mg/L	0.010	12/20/17 12:53	2q
EPA 6010	Zinc	0.090	mg/L	0.040	12/20/17 12:53	2q
EPA 7471	Mercury	0.042J	mg/kg	0.043	12/20/17 11:49	4q
EPA 8270	Anthracene	0.044J	mg/kg	0.11	12/20/17 16:45	
EPA 8270	Benzo(a)anthracene	0.28	mg/kg	0.10	12/20/17 16:45	
EPA 8270	Benzo(a)pyrene	0.33	mg/kg	0.10	12/20/17 16:45	
EPA 8270	Benzo(b)fluoranthene	0.47	mg/kg	0.12	12/20/17 16:45	
EPA 8270	Benzo(g,h,i)perylene	0.30	mg/kg	0.18	12/20/17 16:45	
EPA 8270	Benzo(k)fluoranthene	0.21	mg/kg	0.16	12/20/17 16:45	
EPA 8270	Chrysene	0.35	mg/kg	0.10	12/20/17 16:45	
EPA 8270	bis(2-Ethylhexyl)phthalate	0.052J	mg/kg	0.11	12/20/17 16:45	
EPA 8270	Fluoranthene	0.66	mg/kg	0.095	12/20/17 16:45	
EPA 8270	Indeno(1,2,3-cd)pyrene	0.27	mg/kg	0.15	12/20/17 16:45	
EPA 8270	Phenanthrene	0.23	mg/kg	0.086	12/20/17 16:45	
EPA 8270	Pyrene	0.53	mg/kg	0.15	12/20/17 16:45	
ASTM D2974-87	Percent Moisture	17.4	%	0.10	12/16/17 14:41	
EPA 9045	pH at 25 Degrees C	8.42	Std. Units	0.100	12/18/17 11:00	H6
40162435007	**3019-01-B04 (0-1')**					
EPA 6010	Arsenic	3.6J	mg/kg	5.0	12/19/17 11:56	
EPA 6010	Barium	31.3	mg/kg	0.50	12/19/17 11:56	
EPA 6010	Beryllium	0.15J	mg/kg	0.40	12/19/17 11:56	
EPA 6010	Boron	21.7	mg/kg	4.0	12/19/17 11:56	
EPA 6010	Cadmium	0.30J	mg/kg	0.50	12/19/17 11:56	
EPA 6010	Calcium	155000	mg/kg	501	12/19/17 15:09	
EPA 6010	Chromium	10.4	mg/kg	1.0	12/19/17 11:56	
EPA 6010	Cobalt	2.6	mg/kg	0.50	12/19/17 11:56	
EPA 6010	Copper	9.3	mg/kg	2.5	12/19/17 11:56	
EPA 6010	Iron	6400	mg/kg	10.0	12/19/17 11:56	
EPA 6010	Lead	46.9	mg/kg	1.3	12/19/17 11:56	
EPA 6010	Magnesium	84200	mg/kg	1000	12/19/17 15:09	
EPA 6010	Manganese	257	mg/kg	1.0	12/19/17 11:56	
EPA 6010	Nickel	6.9	mg/kg	1.0	12/19/17 11:56	
EPA 6010	Potassium	1140	mg/kg	100	12/19/17 11:56	
EPA 6010	Sodium	303	mg/kg	50.1	12/19/17 11:56	
EPA 6010	Vanadium	10.8	mg/kg	1.0	12/19/17 11:56	
EPA 6010	Zinc	59.8	mg/kg	4.0	12/19/17 11:56	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435007	**3019-01-B04 (0-1')**					
EPA 6010	Lead	0.053	mg/L	0.013	01/03/18 12:24	
EPA 6010	Manganese	0.19	mg/L	0.0055	01/03/18 12:24	
EPA 6010	Barium	0.46	mg/L	0.015	12/20/17 13:00	
EPA 6010	Boron	0.13J	mg/L	0.15	12/20/17 13:00	
EPA 6010	Cadmium	0.0041J	mg/L	0.0050	12/20/17 13:00	
EPA 6010	Lead	0.0093J	mg/L	0.013	12/20/17 13:00	2q
EPA 6010	Manganese	1.0	mg/L	0.0055	12/20/17 13:00	
EPA 6010	Nickel	0.014	mg/L	0.010	12/20/17 13:00	2q
EPA 6010	Zinc	0.10	mg/L	0.040	12/20/17 13:00	2q
EPA 8270	Benzo(a)anthracene	0.092J	mg/kg	0.094	12/20/17 17:28	
EPA 8270	Benzo(a)pyrene	0.13	mg/kg	0.091	12/20/17 17:28	
EPA 8270	Benzo(b)fluoranthene	0.19	mg/kg	0.10	12/20/17 17:28	
EPA 8270	Benzo(g,h,i)perylene	0.13J	mg/kg	0.16	12/20/17 17:28	
EPA 8270	Benzo(k)fluoranthene	0.066J	mg/kg	0.14	12/20/17 17:28	
EPA 8270	Chrysene	0.13	mg/kg	0.090	12/20/17 17:28	
EPA 8270	Fluoranthene	0.25	mg/kg	0.085	12/20/17 17:28	
EPA 8270	Indeno(1,2,3-cd)pyrene	0.11J	mg/kg	0.13	12/20/17 17:28	
EPA 8270	Phenanthrene	0.087	mg/kg	0.078	12/20/17 17:28	
EPA 8270	Pyrene	0.19	mg/kg	0.13	12/20/17 17:28	
EPA 8260	Acetone	0.061	mg/kg	0.021	12/18/17 18:35	
ASTM D2974-87	Percent Moisture	7.8	%	0.10	12/16/17 14:41	
EPA 9045	pH at 25 Degrees C	8.71	Std. Units	0.100	12/18/17 11:02	H6
40162435008	**3019-01-B05 (0-7')**					
EPA 6010	Arsenic	10.8	mg/kg	5.5	12/19/17 12:04	
EPA 6010	Barium	56.9	mg/kg	0.55	12/19/17 12:04	
EPA 6010	Beryllium	0.65	mg/kg	0.44	12/19/17 12:04	
EPA 6010	Boron	14.9	mg/kg	4.4	12/19/17 12:04	
EPA 6010	Cadmium	0.55	mg/kg	0.55	12/19/17 12:04	
EPA 6010	Calcium	20300	mg/kg	54.6	12/19/17 12:04	
EPA 6010	Chromium	17.8	mg/kg	1.1	12/19/17 12:04	
EPA 6010	Cobalt	10.5	mg/kg	0.55	12/19/17 12:04	
EPA 6010	Copper	30.7	mg/kg	2.7	12/19/17 12:04	
EPA 6010	Iron	20900	mg/kg	10.9	12/19/17 12:04	
EPA 6010	Lead	25.0	mg/kg	1.4	12/19/17 12:04	
EPA 6010	Magnesium	14200	mg/kg	109	12/19/17 12:04	
EPA 6010	Manganese	338	mg/kg	1.1	12/19/17 12:04	
EPA 6010	Nickel	25.7	mg/kg	1.1	12/19/17 12:04	
EPA 6010	Potassium	2600	mg/kg	109	12/19/17 12:04	
EPA 6010	Sodium	1120	mg/kg	54.6	12/19/17 12:04	
EPA 6010	Vanadium	25.5	mg/kg	1.1	12/19/17 12:04	
EPA 6010	Zinc	81.4	mg/kg	4.4	12/19/17 12:04	
EPA 6010	Lead	0.34	mg/L	0.013	01/03/18 12:26	
EPA 6010	Manganese	1.3	mg/L	0.0055	01/03/18 12:26	
EPA 6010	Barium	0.47	mg/L	0.015	12/20/17 13:02	
EPA 6010	Boron	0.093J	mg/L	0.15	12/20/17 13:02	
EPA 6010	Cadmium	0.0026J	mg/L	0.0050	12/20/17 13:02	
EPA 6010	Cobalt	0.039	mg/L	0.0050	12/20/17 13:02	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435008	**3019-01-B05 (0-7')**					
EPA 6010	Iron	0.043J	mg/L	0.10	12/20/17 13:02	
EPA 6010	Lead	0.0083J	mg/L	0.013	12/20/17 13:02	2q
EPA 6010	Manganese	3.9	mg/L	0.0055	12/20/17 13:02	
EPA 6010	Nickel	0.033	mg/L	0.010	12/20/17 13:02	
EPA 6010	Zinc	0.048	mg/L	0.040	12/20/17 13:02	2q
EPA 7471	Mercury	0.038	mg/kg	0.038	12/20/17 11:54	4q
EPA 8270	Benzo(a)anthracene	0.038J	mg/kg	0.099	12/20/17 15:19	
EPA 8270	Benzo(b)fluoranthene	0.039J	mg/kg	0.11	12/20/17 15:19	
EPA 8270	Chrysene	0.038J	mg/kg	0.096	12/20/17 15:19	
EPA 8270	Fluoranthene	0.068J	mg/kg	0.091	12/20/17 15:19	
EPA 8270	Phenanthrene	0.035J	mg/kg	0.082	12/20/17 15:19	
EPA 8270	Pyrene	0.054J	mg/kg	0.14	12/20/17 15:19	
EPA 8260	Acetone	0.16	mg/kg	0.031	12/18/17 13:38	
ASTM D2974-87	Percent Moisture	13.3	%	0.10	12/16/17 14:41	
EPA 9045	pH at 25 Degrees C	8.54	Std. Units	0.100	12/18/17 11:04	H6
40162435009	**3019-01-B05 (7-14')**					
EPA 6010	Arsenic	7.1	mg/kg	5.8	12/19/17 12:06	
EPA 6010	Barium	47.0	mg/kg	0.58	12/19/17 12:06	
EPA 6010	Beryllium	0.74	mg/kg	0.46	12/19/17 12:06	
EPA 6010	Boron	25.2	mg/kg	4.6	12/19/17 12:06	
EPA 6010	Cadmium	0.27J	mg/kg	0.58	12/19/17 12:06	
EPA 6010	Calcium	44000	mg/kg	57.6	12/19/17 12:06	
EPA 6010	Chromium	21.9	mg/kg	1.2	12/19/17 12:06	
EPA 6010	Cobalt	14.1	mg/kg	0.58	12/19/17 12:06	
EPA 6010	Copper	29.9	mg/kg	2.9	12/19/17 12:06	
EPA 6010	Iron	24700	mg/kg	11.5	12/19/17 12:06	
EPA 6010	Lead	16.7	mg/kg	1.5	12/19/17 12:06	
EPA 6010	Magnesium	26700	mg/kg	115	12/19/17 12:06	
EPA 6010	Manganese	443	mg/kg	1.2	12/19/17 12:06	
EPA 6010	Nickel	33.6	mg/kg	1.2	12/19/17 12:06	
EPA 6010	Potassium	4290	mg/kg	115	12/19/17 12:06	
EPA 6010	Sodium	572	mg/kg	57.6	12/19/17 12:06	
EPA 6010	Vanadium	27.3	mg/kg	1.2	12/19/17 12:06	
EPA 6010	Zinc	63.5	mg/kg	4.6	12/19/17 12:06	
EPA 6010	Manganese	0.046	mg/L	0.0055	01/03/18 12:28	
EPA 6010	Barium	0.53	mg/L	0.015	12/20/17 13:05	
EPA 6010	Boron	0.058J	mg/L	0.15	12/20/17 13:05	
EPA 6010	Cadmium	0.0017J	mg/L	0.0050	12/20/17 13:05	
EPA 6010	Cobalt	0.029	mg/L	0.0050	12/20/17 13:05	
EPA 6010	Iron	0.11	mg/L	0.10	12/20/17 13:05	
EPA 6010	Lead	0.0053J	mg/L	0.013	12/20/17 13:05	2q
EPA 6010	Manganese	5.2	mg/L	0.0055	12/20/17 13:05	
EPA 6010	Nickel	0.032	mg/L	0.010	12/20/17 13:05	
EPA 6010	Zinc	0.032J	mg/L	0.040	12/20/17 13:05	2q
EPA 8260	Acetone	0.047	mg/kg	0.027	12/18/17 14:01	
ASTM D2974-87	Percent Moisture	16.6	%	0.10	12/16/17 14:41	
EPA 9045	pH at 25 Degrees C	7.51	Std. Units	0.100	12/18/17 11:08	H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B04 (0-1') **Lab ID: 40162435007** Collected: 12/13/17 10:20 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<0.80**	mg/kg	2.5	0.80	1	12/18/17 11:34	12/19/17 11:56	7440-36-0	
Arsenic	**3.6J**	mg/kg	5.0	1.1	1	12/18/17 11:34	12/19/17 11:56	7440-38-2	
Barium	**31.3**	mg/kg	0.50	0.15	1	12/18/17 11:34	12/19/17 11:56	7440-39-3	
Beryllium	**0.15J**	mg/kg	0.40	0.12	1	12/18/17 11:34	12/19/17 11:56	7440-41-7	
Boron	**21.7**	mg/kg	4.0	0.67	1	12/18/17 11:34	12/19/17 11:56	7440-42-8	
Cadmium	**0.30J**	mg/kg	0.50	0.13	1	12/18/17 11:34	12/19/17 11:56	7440-43-9	
Calcium	**155000**	mg/kg	501	97.9	10	12/18/17 11:34	12/19/17 15:09	7440-70-2	
Chromium	**10.4**	mg/kg	1.0	0.28	1	12/18/17 11:34	12/19/17 11:56	7440-47-3	
Cobalt	**2.6**	mg/kg	0.50	0.14	1	12/18/17 11:34	12/19/17 11:56	7440-48-4	
Copper	**9.3**	mg/kg	2.5	0.82	1	12/18/17 11:34	12/19/17 11:56	7440-50-8	
Iron	**6400**	mg/kg	10.0	1.6	1	12/18/17 11:34	12/19/17 11:56	7439-89-6	
Lead	**46.9**	mg/kg	1.3	0.43	1	12/18/17 11:34	12/19/17 11:56	7439-92-1	
Magnesium	**84200**	mg/kg	1000	115	10	12/18/17 11:34	12/19/17 15:09	7439-95-4	
Manganese	**257**	mg/kg	1.0	0.26	1	12/18/17 11:34	12/19/17 11:56	7439-96-5	
Nickel	**6.9**	mg/kg	1.0	0.23	1	12/18/17 11:34	12/19/17 11:56	7440-02-0	
Potassium	**1140**	mg/kg	100	15.9	1	12/18/17 11:34	12/19/17 11:56	7440-09-7	
Selenium	**<1.1**	mg/kg	5.0	1.1	1	12/18/17 11:34	12/19/17 11:56	7782-49-2	
Silver	**<0.34**	mg/kg	1.0	0.34	1	12/18/17 11:34	12/19/17 11:56	7440-22-4	
Sodium	**303**	mg/kg	50.1	10.4	1	12/18/17 11:34	12/19/17 11:56	7440-23-5	
Thallium	**<0.78**	mg/kg	4.0	0.78	1	12/18/17 11:34	12/19/17 11:56	7440-28-0	
Vanadium	**10.8**	mg/kg	1.0	0.22	1	12/18/17 11:34	12/19/17 11:56	7440-62-2	
Zinc	**59.8**	mg/kg	4.0	0.94	1	12/18/17 11:34	12/19/17 11:56	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Lead	**0.053**	mg/L	0.013	0.0043	1	01/02/18 14:01	01/03/18 12:24	7439-92-1	
Manganese	**0.19**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:24	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:00	7440-36-0	
Barium	**0.46**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:00	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:00	7440-41-7	
Boron	**0.13J**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:00	7440-42-8	
Cadmium	**0.0041J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:00	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:00	7440-47-3	
Cobalt	**<0.0014**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:00	7440-48-4	
Iron	**<0.034**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:00	7439-89-6	
Lead	**0.0093J**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:00	7439-92-1	2q
Manganese	**1.0**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:00	7439-96-5	
Nickel	**0.014**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:00	7440-02-0	2q
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:00	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:00	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:00	7440-28-0	1q,3q
Zinc	**0.10**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:00	7440-66-6	2q

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B04 (0-1') **Lab ID: 40162435007** Collected: 12/13/17 10:20 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 09:50	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.012**	mg/kg	0.040	0.012	1	12/20/17 06:44	12/20/17 11:51	7439-97-6	4q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.064**	mg/kg	0.21	0.064	1	12/19/17 10:37	12/20/17 17:28	83-32-9	
Acenaphthylene	**<0.065**	mg/kg	0.22	0.065	1	12/19/17 10:37	12/20/17 17:28	208-96-8	
Anthracene	**<0.029**	mg/kg	0.097	0.029	1	12/19/17 10:37	12/20/17 17:28	120-12-7	
Benzo(a)anthracene	**0.092J**	mg/kg	0.094	0.028	1	12/19/17 10:37	12/20/17 17:28	56-55-3	
Benzo(a)pyrene	**0.13**	mg/kg	0.091	0.027	1	12/19/17 10:37	12/20/17 17:28	50-32-8	
Benzo(b)fluoranthene	**0.19**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 17:28	205-99-2	
Benzo(g,h,i)perylene	**0.13J**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/20/17 17:28	191-24-2	
Benzo(k)fluoranthene	**0.066J**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 17:28	207-08-9	
4-Bromophenylphenyl ether	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/20/17 17:28	101-55-3	
Butylbenzylphthalate	**<0.029**	mg/kg	0.097	0.029	1	12/19/17 10:37	12/20/17 17:28	85-68-7	
Carbazole	**<0.028**	mg/kg	0.095	0.028	1	12/19/17 10:37	12/20/17 17:28	86-74-8	
4-Chloro-3-methylphenol	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 17:28	59-50-7	
4-Chloroaniline	**<0.030**	mg/kg	0.099	0.030	1	12/19/17 10:37	12/20/17 17:28	106-47-8	
bis(2-Chloroethoxy)methane	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 17:28	111-91-1	
bis(2-Chloroethyl) ether	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 17:28	111-44-4	
2-Chloronaphthalene	**<0.023**	mg/kg	0.078	0.023	1	12/19/17 10:37	12/20/17 17:28	91-58-7	
2-Chlorophenol	**<0.045**	mg/kg	0.15	0.045	1	12/19/17 10:37	12/20/17 17:28	95-57-8	
4-Chlorophenylphenyl ether	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 17:28	7005-72-3	
Chrysene	**0.13**	mg/kg	0.090	0.027	1	12/19/17 10:37	12/20/17 17:28	218-01-9	
Dibenz(a,h)anthracene	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 17:28	53-70-3	
Dibenzofuran	**<0.022**	mg/kg	0.073	0.022	1	12/19/17 10:37	12/20/17 17:28	132-64-9	
1,2-Dichlorobenzene	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 17:28	95-50-1	
1,3-Dichlorobenzene	**<0.025**	mg/kg	0.084	0.025	1	12/19/17 10:37	12/20/17 17:28	541-73-1	
1,4-Dichlorobenzene	**<0.025**	mg/kg	0.084	0.025	1	12/19/17 10:37	12/20/17 17:28	106-46-7	
3,3'-Dichlorobenzidine	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 17:28	91-94-1	
2,4-Dichlorophenol	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 17:28	120-83-2	
Diethylphthalate	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 17:28	84-66-2	
2,4-Dimethylphenol	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 17:28	105-67-9	
Dimethylphthalate	**<0.024**	mg/kg	0.079	0.024	1	12/19/17 10:37	12/20/17 17:28	131-11-3	
Di-n-butylphthalate	**<0.027**	mg/kg	0.090	0.027	1	12/19/17 10:37	12/20/17 17:28	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 17:28	534-52-1	
2,4-Dinitrophenol	**<0.055**	mg/kg	0.18	0.055	1	12/19/17 10:37	12/20/17 17:28	51-28-5	
2,4-Dinitrotoluene	**<0.026**	mg/kg	0.086	0.026	1	12/19/17 10:37	12/20/17 17:28	121-14-2	
2,6-Dinitrotoluene	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 17:28	606-20-2	
Di-n-octylphthalate	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/20/17 17:28	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 17:28	117-81-7	
Fluoranthene	**0.25**	mg/kg	0.085	0.026	1	12/19/17 10:37	12/20/17 17:28	206-44-0	
Fluorene	**<0.021**	mg/kg	0.071	0.021	1	12/19/17 10:37	12/20/17 17:28	86-73-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B04 (0-1') **Lab ID: 40162435007** Collected: 12/13/17 10:20 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 17:28	87-68-3	
Hexachlorobenzene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 17:28	118-74-1	
Hexachlorocyclopentadiene	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 17:28	77-47-4	
Hexachloroethane	**<0.029**	mg/kg	0.097	0.029	1	12/19/17 10:37	12/20/17 17:28	67-72-1	
Indeno(1,2,3-cd)pyrene	**0.11J**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/20/17 17:28	193-39-5	
Isophorone	**<0.028**	mg/kg	0.093	0.028	1	12/19/17 10:37	12/20/17 17:28	78-59-1	
2-Methylnaphthalene	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/20/17 17:28	91-57-6	
2-Methylphenol(o-Cresol)	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 17:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 17:28		
Naphthalene	**<0.063**	mg/kg	0.21	0.063	1	12/19/17 10:37	12/20/17 17:28	91-20-3	
2-Nitroaniline	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/20/17 17:28	88-74-4	
3-Nitroaniline	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 17:28	99-09-2	
4-Nitroaniline	**<0.075**	mg/kg	0.25	0.075	1	12/19/17 10:37	12/20/17 17:28	100-01-6	
Nitrobenzene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 17:28	98-95-3	
2-Nitrophenol	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 17:28	88-75-5	
4-Nitrophenol	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 17:28	100-02-7	
N-Nitroso-di-n-propylamine	**<0.029**	mg/kg	0.096	0.029	1	12/19/17 10:37	12/20/17 17:28	621-64-7	
N-Nitrosodiphenylamine	**<0.25**	mg/kg	0.82	0.25	1	12/19/17 10:37	12/20/17 17:28	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/20/17 17:28	108-60-1	
Pentachlorophenol	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 17:28	87-86-5	
Phenanthrene	**0.087**	mg/kg	0.078	0.023	1	12/19/17 10:37	12/20/17 17:28	85-01-8	
Phenol	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 17:28	108-95-2	
Pyrene	**0.19**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 17:28	129-00-0	
1,2,4-Trichlorobenzene	**<0.020**	mg/kg	0.068	0.020	1	12/19/17 10:37	12/20/17 17:28	120-82-1	
2,4,5-Trichlorophenol	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 17:28	95-95-4	
2,4,6-Trichlorophenol	**<0.028**	mg/kg	0.092	0.028	1	12/19/17 10:37	12/20/17 17:28	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	63	%	13-114		1	12/19/17 10:37	12/20/17 17:28	4165-60-0	
2-Fluorobiphenyl (S)	68	%	18-127		1	12/19/17 10:37	12/20/17 17:28	321-60-8	
Terphenyl-d14 (S)	83	%	41-109		1	12/19/17 10:37	12/20/17 17:28	1718-51-0	
Phenol-d6 (S)	64	%	30-97		1	12/19/17 10:37	12/20/17 17:28	13127-88-3	
2-Fluorophenol (S)	58	%	16-103		1	12/19/17 10:37	12/20/17 17:28	367-12-4	
2,4,6-Tribromophenol (S)	73	%	13-143		1	12/19/17 10:37	12/20/17 17:28	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.061**	mg/kg	0.021	0.0062	1	12/18/17 05:00	12/18/17 18:35	67-64-1	
Benzene	**<0.0030**	mg/kg	0.010	0.0030	1	12/18/17 05:00	12/18/17 18:35	71-43-2	
Bromodichloromethane	**<0.0021**	mg/kg	0.0072	0.0021	1	12/18/17 05:00	12/18/17 18:35	75-27-4	
Bromoform	**<0.0027**	mg/kg	0.0090	0.0027	1	12/18/17 05:00	12/18/17 18:35	75-25-2	
Bromomethane	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 18:35	74-83-9	
2-Butanone (MEK)	**<0.0030**	mg/kg	0.010	0.0030	1	12/18/17 05:00	12/18/17 18:35	78-93-3	
Carbon disulfide	**<0.0031**	mg/kg	0.010	0.0031	1	12/18/17 05:00	12/18/17 18:35	75-15-0	
Carbon tetrachloride	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 18:35	56-23-5	
Chlorobenzene	**<0.0024**	mg/kg	0.0078	0.0024	1	12/18/17 05:00	12/18/17 18:35	108-90-7	
Chloroethane	**<0.0028**	mg/kg	0.0095	0.0028	1	12/18/17 05:00	12/18/17 18:35	75-00-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B04 (0-1') **Lab ID: 40162435007** Collected: 12/13/17 10:20 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 18:35	67-66-3	
Chloromethane	**<0.0027**	mg/kg	0.0090	0.0027	1	12/18/17 05:00	12/18/17 18:35	74-87-3	
Dibromochloromethane	**<0.0021**	mg/kg	0.0070	0.0021	1	12/18/17 05:00	12/18/17 18:35	124-48-1	
1,1-Dichloroethane	**<0.0030**	mg/kg	0.0099	0.0030	1	12/18/17 05:00	12/18/17 18:35	75-34-3	
1,2-Dichloroethane	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 18:35	107-06-2	
1,1-Dichloroethene	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 18:35	75-35-4	
cis-1,2-Dichloroethene	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 18:35	156-59-2	
trans-1,2-Dichloroethene	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 18:35	156-60-5	L1
1,2-Dichloropropane	**<0.0021**	mg/kg	0.0069	0.0021	1	12/18/17 05:00	12/18/17 18:35	78-87-5	
cis-1,3-Dichloropropene	**<0.0016**	mg/kg	0.0054	0.0016	1	12/18/17 05:00	12/18/17 18:35	10061-01-5	
trans-1,3-Dichloropropene	**<0.0015**	mg/kg	0.0052	0.0015	1	12/18/17 05:00	12/18/17 18:35	10061-02-6	
Ethylbenzene	**<0.0024**	mg/kg	0.0081	0.0024	1	12/18/17 05:00	12/18/17 18:35	100-41-4	
2-Hexanone	**<0.0019**	mg/kg	0.0064	0.0019	1	12/18/17 05:00	12/18/17 18:35	591-78-6	
Methylene Chloride	**<0.0031**	mg/kg	0.011	0.0031	1	12/18/17 05:00	12/18/17 18:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0021**	mg/kg	0.0070	0.0021	1	12/18/17 05:00	12/18/17 18:35	108-10-1	
Methyl-tert-butyl ether	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 18:35	1634-04-4	
Styrene	**<0.0027**	mg/kg	0.0089	0.0027	1	12/18/17 05:00	12/18/17 18:35	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0022**	mg/kg	0.0074	0.0022	1	12/18/17 05:00	12/18/17 18:35	79-34-5	
Tetrachloroethene	**<0.0029**	mg/kg	0.0097	0.0029	1	12/18/17 05:00	12/18/17 18:35	127-18-4	
Toluene	**<0.0023**	mg/kg	0.0077	0.0023	1	12/18/17 05:00	12/18/17 18:35	108-88-3	
1,1,1-Trichloroethane	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 18:35	71-55-6	
1,1,2-Trichloroethane	**<0.0025**	mg/kg	0.0083	0.0025	1	12/18/17 05:00	12/18/17 18:35	79-00-5	
Trichloroethene	**<0.0023**	mg/kg	0.0075	0.0023	1	12/18/17 05:00	12/18/17 18:35	79-01-6	
Vinyl acetate	**<0.0026**	mg/kg	0.0087	0.0026	1	12/18/17 05:00	12/18/17 18:35	108-05-4	
Vinyl chloride	**<0.0029**	mg/kg	0.0098	0.0029	1	12/18/17 05:00	12/18/17 18:35	75-01-4	
Xylene (Total)	**<0.0078**	mg/kg	0.026	0.0078	1	12/18/17 05:00	12/18/17 18:35	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	110	%	70-130		1	12/18/17 05:00	12/18/17 18:35	1868-53-7	
Toluene-d8 (S)	115	%	70-130		1	12/18/17 05:00	12/18/17 18:35	2037-26-5	
4-Bromofluorobenzene (S)	87	%	70-130		1	12/18/17 05:00	12/18/17 18:35	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**7.8**	%	0.10	0.10	1		12/16/17 14:41		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.71**	Std. Units	0.100	0.0100	1		12/18/17 11:02		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (0-7') **Lab ID: 40162435008** Collected: 12/13/17 12:30 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<0.87**	mg/kg	2.7	0.87	1	12/18/17 11:34	12/19/17 12:04	7440-36-0	
Arsenic	**10.8**	mg/kg	5.5	1.1	1	12/18/17 11:34	12/19/17 12:04	7440-38-2	
Barium	**56.9**	mg/kg	0.55	0.16	1	12/18/17 11:34	12/19/17 12:04	7440-39-3	
Beryllium	**0.65**	mg/kg	0.44	0.13	1	12/18/17 11:34	12/19/17 12:04	7440-41-7	
Boron	**14.9**	mg/kg	4.4	0.73	1	12/18/17 11:34	12/19/17 12:04	7440-42-8	
Cadmium	**0.55**	mg/kg	0.55	0.15	1	12/18/17 11:34	12/19/17 12:04	7440-43-9	
Calcium	**20300**	mg/kg	54.6	10.7	1	12/18/17 11:34	12/19/17 12:04	7440-70-2	
Chromium	**17.8**	mg/kg	1.1	0.30	1	12/18/17 11:34	12/19/17 12:04	7440-47-3	
Cobalt	**10.5**	mg/kg	0.55	0.16	1	12/18/17 11:34	12/19/17 12:04	7440-48-4	
Copper	**30.7**	mg/kg	2.7	0.90	1	12/18/17 11:34	12/19/17 12:04	7440-50-8	
Iron	**20900**	mg/kg	10.9	1.7	1	12/18/17 11:34	12/19/17 12:04	7439-89-6	
Lead	**25.0**	mg/kg	1.4	0.47	1	12/18/17 11:34	12/19/17 12:04	7439-92-1	
Magnesium	**14200**	mg/kg	109	12.6	1	12/18/17 11:34	12/19/17 12:04	7439-95-4	
Manganese	**338**	mg/kg	1.1	0.28	1	12/18/17 11:34	12/19/17 12:04	7439-96-5	
Nickel	**25.7**	mg/kg	1.1	0.25	1	12/18/17 11:34	12/19/17 12:04	7440-02-0	
Potassium	**2600**	mg/kg	109	17.4	1	12/18/17 11:34	12/19/17 12:04	7440-09-7	
Selenium	**<1.2**	mg/kg	5.5	1.2	1	12/18/17 11:34	12/19/17 12:04	7782-49-2	
Silver	**<0.38**	mg/kg	1.1	0.38	1	12/18/17 11:34	12/19/17 12:04	7440-22-4	
Sodium	**1120**	mg/kg	54.6	11.4	1	12/18/17 11:34	12/19/17 12:04	7440-23-5	
Thallium	**<0.85**	mg/kg	4.4	0.85	1	12/18/17 11:34	12/19/17 12:04	7440-28-0	
Vanadium	**25.5**	mg/kg	1.1	0.24	1	12/18/17 11:34	12/19/17 12:04	7440-62-2	
Zinc	**81.4**	mg/kg	4.4	1.0	1	12/18/17 11:34	12/19/17 12:04	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Lead	**0.34**	mg/L	0.013	0.0043	1	01/02/18 14:01	01/03/18 12:26	7439-92-1	
Manganese	**1.3**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:26	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:02	7440-36-0	
Barium	**0.47**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:02	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:02	7440-41-7	
Boron	**0.093J**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:02	7440-42-8	
Cadmium	**0.0026J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:02	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:02	7440-47-3	
Cobalt	**0.039**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:02	7440-48-4	
Iron	**0.043J**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:02	7439-89-6	
Lead	**0.0083J**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:02	7439-92-1	2q
Manganese	**3.9**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:02	7439-96-5	
Nickel	**0.033**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:02	7440-02-0	
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:02	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:02	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:02	7440-28-0	1q,3q
Zinc	**0.048**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:02	7440-66-6	2q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (0-7') **Lab ID: 40162435008** Collected: 12/13/17 12:30 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 09:53	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.038**	mg/kg	0.038	0.011	1	12/20/17 06:44	12/20/17 11:54	7439-97-6	4q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.068**	mg/kg	0.23	0.068	1	12/19/17 10:37	12/20/17 15:19	83-32-9	
Acenaphthylene	**<0.069**	mg/kg	0.23	0.069	1	12/19/17 10:37	12/20/17 15:19	208-96-8	
Anthracene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 15:19	120-12-7	
Benzo(a)anthracene	**0.038J**	mg/kg	0.099	0.030	1	12/19/17 10:37	12/20/17 15:19	56-55-3	
Benzo(a)pyrene	**<0.029**	mg/kg	0.096	0.029	1	12/19/17 10:37	12/20/17 15:19	50-32-8	
Benzo(b)fluoranthene	**0.039J**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 15:19	205-99-2	
Benzo(g,h,i)perylene	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/20/17 15:19	191-24-2	
Benzo(k)fluoranthene	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 15:19	207-08-9	
4-Bromophenylphenyl ether	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 15:19	101-55-3	
Butylbenzylphthalate	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 15:19	85-68-7	
Carbazole	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 15:19	86-74-8	
4-Chloro-3-methylphenol	**<0.060**	mg/kg	0.20	0.060	1	12/19/17 10:37	12/20/17 15:19	59-50-7	
4-Chloroaniline	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 15:19	106-47-8	
bis(2-Chloroethoxy)methane	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/20/17 15:19	111-91-1	
bis(2-Chloroethyl) ether	**<0.060**	mg/kg	0.20	0.060	1	12/19/17 10:37	12/20/17 15:19	111-44-4	
2-Chloronaphthalene	**<0.025**	mg/kg	0.082	0.025	1	12/19/17 10:37	12/20/17 15:19	91-58-7	
2-Chlorophenol	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 15:19	95-57-8	
4-Chlorophenylphenyl ether	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 15:19	7005-72-3	
Chrysene	**0.038J**	mg/kg	0.096	0.029	1	12/19/17 10:37	12/20/17 15:19	218-01-9	
Dibenz(a,h)anthracene	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/20/17 15:19	53-70-3	
Dibenzofuran	**<0.023**	mg/kg	0.078	0.023	1	12/19/17 10:37	12/20/17 15:19	132-64-9	
1,2-Dichlorobenzene	**<0.060**	mg/kg	0.20	0.060	1	12/19/17 10:37	12/20/17 15:19	95-50-1	
1,3-Dichlorobenzene	**<0.027**	mg/kg	0.089	0.027	1	12/19/17 10:37	12/20/17 15:19	541-73-1	
1,4-Dichlorobenzene	**<0.027**	mg/kg	0.089	0.027	1	12/19/17 10:37	12/20/17 15:19	106-46-7	
3,3'-Dichlorobenzidine	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/20/17 15:19	91-94-1	
2,4-Dichlorophenol	**<0.051**	mg/kg	0.17	0.051	1	12/19/17 10:37	12/20/17 15:19	120-83-2	
Diethylphthalate	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 15:19	84-66-2	
2,4-Dimethylphenol	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/20/17 15:19	105-67-9	
Dimethylphthalate	**<0.025**	mg/kg	0.083	0.025	1	12/19/17 10:37	12/20/17 15:19	131-11-3	
Di-n-butylphthalate	**<0.029**	mg/kg	0.096	0.029	1	12/19/17 10:37	12/20/17 15:19	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.059**	mg/kg	0.20	0.059	1	12/19/17 10:37	12/20/17 15:19	534-52-1	
2,4-Dinitrophenol	**<0.059**	mg/kg	0.20	0.059	1	12/19/17 10:37	12/20/17 15:19	51-28-5	
2,4-Dinitrotoluene	**<0.028**	mg/kg	0.092	0.028	1	12/19/17 10:37	12/20/17 15:19	121-14-2	
2,6-Dinitrotoluene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 15:19	606-20-2	
Di-n-octylphthalate	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 15:19	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 15:19	117-81-7	
Fluoranthene	**0.068J**	mg/kg	0.091	0.027	1	12/19/17 10:37	12/20/17 15:19	206-44-0	
Fluorene	**<0.022**	mg/kg	0.075	0.022	1	12/19/17 10:37	12/20/17 15:19	86-73-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (0-7') **Lab ID: 40162435008** Collected: 12/13/17 12:30 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 15:19	87-68-3	
Hexachlorobenzene	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 15:19	118-74-1	
Hexachlorocyclopentadiene	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 15:19	77-47-4	
Hexachloroethane	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 15:19	67-72-1	
Indeno(1,2,3-cd)pyrene	**<0.042**	mg/kg	0.14	0.042	1	12/19/17 10:37	12/20/17 15:19	193-39-5	
Isophorone	**<0.030**	mg/kg	0.099	0.030	1	12/19/17 10:37	12/20/17 15:19	78-59-1	
2-Methylnaphthalene	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/20/17 15:19	91-57-6	
2-Methylphenol(o-Cresol)	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 15:19	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 15:19		
Naphthalene	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/20/17 15:19	91-20-3	
2-Nitroaniline	**<0.055**	mg/kg	0.18	0.055	1	12/19/17 10:37	12/20/17 15:19	88-74-4	
3-Nitroaniline	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 15:19	99-09-2	
4-Nitroaniline	**<0.080**	mg/kg	0.27	0.080	1	12/19/17 10:37	12/20/17 15:19	100-01-6	
Nitrobenzene	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/20/17 15:19	98-95-3	
2-Nitrophenol	**<0.061**	mg/kg	0.20	0.061	1	12/19/17 10:37	12/20/17 15:19	88-75-5	
4-Nitrophenol	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 15:19	100-02-7	
N-Nitroso-di-n-propylamine	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 15:19	621-64-7	
N-Nitrosodiphenylamine	**<0.26**	mg/kg	0.87	0.26	1	12/19/17 10:37	12/20/17 15:19	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/20/17 15:19	108-60-1	
Pentachlorophenol	**<0.042**	mg/kg	0.14	0.042	1	12/19/17 10:37	12/20/17 15:19	87-86-5	
Phenanthrene	**0.035J**	mg/kg	0.082	0.025	1	12/19/17 10:37	12/20/17 15:19	85-01-8	
Phenol	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 15:19	108-95-2	
Pyrene	**0.054J**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 15:19	129-00-0	
1,2,4-Trichlorobenzene	**<0.022**	mg/kg	0.072	0.022	1	12/19/17 10:37	12/20/17 15:19	120-82-1	
2,4,5-Trichlorophenol	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 15:19	95-95-4	
2,4,6-Trichlorophenol	**<0.029**	mg/kg	0.098	0.029	1	12/19/17 10:37	12/20/17 15:19	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	64	%	13-114		1	12/19/17 10:37	12/20/17 15:19	4165-60-0	
2-Fluorobiphenyl (S)	66	%	18-127		1	12/19/17 10:37	12/20/17 15:19	321-60-8	
Terphenyl-d14 (S)	78	%	41-109		1	12/19/17 10:37	12/20/17 15:19	1718-51-0	
Phenol-d6 (S)	64	%	30-97		1	12/19/17 10:37	12/20/17 15:19	13127-88-3	
2-Fluorophenol (S)	62	%	16-103		1	12/19/17 10:37	12/20/17 15:19	367-12-4	
2,4,6-Tribromophenol (S)	62	%	13-143		1	12/19/17 10:37	12/20/17 15:19	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.16**	mg/kg	0.031	0.0092	1	12/18/17 05:00	12/18/17 13:38	67-64-1	
Benzene	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/18/17 13:38	71-43-2	
Bromodichloromethane	**<0.0032**	mg/kg	0.011	0.0032	1	12/18/17 05:00	12/18/17 13:38	75-27-4	
Bromoform	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 13:38	75-25-2	
Bromomethane	**<0.0073**	mg/kg	0.024	0.0073	1	12/18/17 05:00	12/18/17 13:38	74-83-9	
2-Butanone (MEK)	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/18/17 13:38	78-93-3	
Carbon disulfide	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 13:38	75-15-0	
Carbon tetrachloride	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 13:38	56-23-5	
Chlorobenzene	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 13:38	108-90-7	
Chloroethane	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 13:38	75-00-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (0-7') **Lab ID: 40162435008** Collected: 12/13/17 12:30 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/18/17 13:38	67-66-3	
Chloromethane	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 13:38	74-87-3	
Dibromochloromethane	**<0.0031**	mg/kg	0.010	0.0031	1	12/18/17 05:00	12/18/17 13:38	124-48-1	
1,1-Dichloroethane	**<0.0044**	mg/kg	0.015	0.0044	1	12/18/17 05:00	12/18/17 13:38	75-34-3	
1,2-Dichloroethane	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/18/17 13:38	107-06-2	
1,1-Dichloroethene	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/18/17 13:38	75-35-4	
cis-1,2-Dichloroethene	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/18/17 13:38	156-59-2	
trans-1,2-Dichloroethene	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/18/17 13:38	156-60-5	L1
1,2-Dichloropropane	**<0.0031**	mg/kg	0.010	0.0031	1	12/18/17 05:00	12/18/17 13:38	78-87-5	
cis-1,3-Dichloropropene	**<0.0024**	mg/kg	0.0081	0.0024	1	12/18/17 05:00	12/18/17 13:38	10061-01-5	
trans-1,3-Dichloropropene	**<0.0023**	mg/kg	0.0077	0.0023	1	12/18/17 05:00	12/18/17 13:38	10061-02-6	
Ethylbenzene	**<0.0036**	mg/kg	0.012	0.0036	1	12/18/17 05:00	12/18/17 13:38	100-41-4	
2-Hexanone	**<0.0029**	mg/kg	0.0096	0.0029	1	12/18/17 05:00	12/18/17 13:38	591-78-6	
Methylene Chloride	**<0.0047**	mg/kg	0.016	0.0047	1	12/18/17 05:00	12/18/17 13:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0032**	mg/kg	0.011	0.0032	1	12/18/17 05:00	12/18/17 13:38	108-10-1	
Methyl-tert-butyl ether	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 13:38	1634-04-4	
Styrene	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 13:38	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 13:38	79-34-5	
Tetrachloroethene	**<0.0043**	mg/kg	0.014	0.0043	1	12/18/17 05:00	12/18/17 13:38	127-18-4	
Toluene	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 13:38	108-88-3	
1,1,1-Trichloroethane	**<0.0052**	mg/kg	0.017	0.0052	1	12/18/17 05:00	12/18/17 13:38	71-55-6	
1,1,2-Trichloroethane	**<0.0037**	mg/kg	0.012	0.0037	1	12/18/17 05:00	12/18/17 13:38	79-00-5	
Trichloroethene	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 13:38	79-01-6	
Vinyl acetate	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 13:38	108-05-4	
Vinyl chloride	**<0.0044**	mg/kg	0.015	0.0044	1	12/18/17 05:00	12/18/17 13:38	75-01-4	
Xylene (Total)	**<0.012**	mg/kg	0.039	0.012	1	12/18/17 05:00	12/18/17 13:38	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	114	%	70-130		1	12/18/17 05:00	12/18/17 13:38	1868-53-7	
Toluene-d8 (S)	107	%	70-130		1	12/18/17 05:00	12/18/17 13:38	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		1	12/18/17 05:00	12/18/17 13:38	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.3**	%	0.10	0.10	1		12/16/17 14:41		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**8.54**	Std. Units	0.100	0.0100	1		12/18/17 11:04		H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (7-14') **Lab ID: 40162435009** Collected: 12/13/17 12:35 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<0.92**	mg/kg	2.9	0.92	1	12/18/17 11:34	12/19/17 12:06	7440-36-0	
Arsenic	**7.1**	mg/kg	5.8	1.2	1	12/18/17 11:34	12/19/17 12:06	7440-38-2	
Barium	**47.0**	mg/kg	0.58	0.17	1	12/18/17 11:34	12/19/17 12:06	7440-39-3	
Beryllium	**0.74**	mg/kg	0.46	0.14	1	12/18/17 11:34	12/19/17 12:06	7440-41-7	
Boron	**25.2**	mg/kg	4.6	0.77	1	12/18/17 11:34	12/19/17 12:06	7440-42-8	
Cadmium	**0.27J**	mg/kg	0.58	0.15	1	12/18/17 11:34	12/19/17 12:06	7440-43-9	
Calcium	**44000**	mg/kg	57.6	11.3	1	12/18/17 11:34	12/19/17 12:06	7440-70-2	
Chromium	**21.9**	mg/kg	1.2	0.32	1	12/18/17 11:34	12/19/17 12:06	7440-47-3	
Cobalt	**14.1**	mg/kg	0.58	0.16	1	12/18/17 11:34	12/19/17 12:06	7440-48-4	
Copper	**29.9**	mg/kg	2.9	0.95	1	12/18/17 11:34	12/19/17 12:06	7440-50-8	
Iron	**24700**	mg/kg	11.5	1.8	1	12/18/17 11:34	12/19/17 12:06	7439-89-6	
Lead	**16.7**	mg/kg	1.5	0.50	1	12/18/17 11:34	12/19/17 12:06	7439-92-1	
Magnesium	**26700**	mg/kg	115	13.3	1	12/18/17 11:34	12/19/17 12:06	7439-95-4	
Manganese	**443**	mg/kg	1.2	0.29	1	12/18/17 11:34	12/19/17 12:06	7439-96-5	
Nickel	**33.6**	mg/kg	1.2	0.27	1	12/18/17 11:34	12/19/17 12:06	7440-02-0	
Potassium	**4290**	mg/kg	115	18.3	1	12/18/17 11:34	12/19/17 12:06	7440-09-7	
Selenium	**<1.3**	mg/kg	5.8	1.3	1	12/18/17 11:34	12/19/17 12:06	7782-49-2	
Silver	**<0.40**	mg/kg	1.2	0.40	1	12/18/17 11:34	12/19/17 12:06	7440-22-4	
Sodium	**572**	mg/kg	57.6	12.0	1	12/18/17 11:34	12/19/17 12:06	7440-23-5	
Thallium	**<0.89**	mg/kg	4.6	0.89	1	12/18/17 11:34	12/19/17 12:06	7440-28-0	
Vanadium	**27.3**	mg/kg	1.2	0.26	1	12/18/17 11:34	12/19/17 12:06	7440-62-2	
Zinc	**63.5**	mg/kg	4.6	1.1	1	12/18/17 11:34	12/19/17 12:06	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Manganese	**0.046**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:28	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:05	7440-36-0	
Barium	**0.53**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:05	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:05	7440-41-7	
Boron	**0.058J**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:05	7440-42-8	
Cadmium	**0.0017J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:05	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:05	7440-47-3	
Cobalt	**0.029**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:05	7440-48-4	
Iron	**0.11**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:05	7439-89-6	
Lead	**0.0053J**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:05	7439-92-1	2q
Manganese	**5.2**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:05	7439-96-5	
Nickel	**0.032**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:05	7440-02-0	
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:05	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:05	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:05	7440-28-0	1q,3q
Zinc	**0.032J**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:05	7440-66-6	2q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (7-14') **Lab ID: 40162435009** Collected: 12/13/17 12:35 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 09:55	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**<0.012**	mg/kg	0.042	0.012	1	12/20/17 06:44	12/20/17 11:56	7439-97-6	4q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.071**	mg/kg	0.24	0.071	1	12/19/17 10:37	12/19/17 18:23	83-32-9	
Acenaphthylene	**<0.071**	mg/kg	0.24	0.071	1	12/19/17 10:37	12/19/17 18:23	208-96-8	
Anthracene	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/19/17 18:23	120-12-7	
Benzo(a)anthracene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/19/17 18:23	56-55-3	
Benzo(a)pyrene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/19/17 18:23	50-32-8	
Benzo(b)fluoranthene	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/19/17 18:23	205-99-2	
Benzo(g,h,i)perylene	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/19/17 18:23	191-24-2	
Benzo(k)fluoranthene	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/19/17 18:23	207-08-9	
4-Bromophenylphenyl ether	**<0.042**	mg/kg	0.14	0.042	1	12/19/17 10:37	12/19/17 18:23	101-55-3	
Butylbenzylphthalate	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/19/17 18:23	85-68-7	
Carbazole	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/19/17 18:23	86-74-8	
4-Chloro-3-methylphenol	**<0.062**	mg/kg	0.21	0.062	1	12/19/17 10:37	12/19/17 18:23	59-50-7	
4-Chloroaniline	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/19/17 18:23	106-47-8	
bis(2-Chloroethoxy)methane	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/19/17 18:23	111-91-1	
bis(2-Chloroethyl) ether	**<0.063**	mg/kg	0.21	0.063	1	12/19/17 10:37	12/19/17 18:23	111-44-4	
2-Chloronaphthalene	**<0.026**	mg/kg	0.086	0.026	1	12/19/17 10:37	12/19/17 18:23	91-58-7	
2-Chlorophenol	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/19/17 18:23	95-57-8	
4-Chlorophenylphenyl ether	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/19/17 18:23	7005-72-3	
Chrysene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/19/17 18:23	218-01-9	
Dibenz(a,h)anthracene	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/19/17 18:23	53-70-3	
Dibenzofuran	**<0.024**	mg/kg	0.081	0.024	1	12/19/17 10:37	12/19/17 18:23	132-64-9	
1,2-Dichlorobenzene	**<0.063**	mg/kg	0.21	0.063	1	12/19/17 10:37	12/19/17 18:23	95-50-1	
1,3-Dichlorobenzene	**<0.028**	mg/kg	0.092	0.028	1	12/19/17 10:37	12/19/17 18:23	541-73-1	
1,4-Dichlorobenzene	**<0.028**	mg/kg	0.093	0.028	1	12/19/17 10:37	12/19/17 18:23	106-46-7	
3,3'-Dichlorobenzidine	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/19/17 18:23	91-94-1	
2,4-Dichlorophenol	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/19/17 18:23	120-83-2	
Diethylphthalate	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/19/17 18:23	84-66-2	
2,4-Dimethylphenol	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/19/17 18:23	105-67-9	
Dimethylphthalate	**<0.026**	mg/kg	0.087	0.026	1	12/19/17 10:37	12/19/17 18:23	131-11-3	
Di-n-butylphthalate	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/19/17 18:23	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.062**	mg/kg	0.21	0.062	1	12/19/17 10:37	12/19/17 18:23	534-52-1	
2,4-Dinitrophenol	**<0.061**	mg/kg	0.20	0.061	1	12/19/17 10:37	12/19/17 18:23	51-28-5	
2,4-Dinitrotoluene	**<0.029**	mg/kg	0.095	0.029	1	12/19/17 10:37	12/19/17 18:23	121-14-2	
2,6-Dinitrotoluene	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/19/17 18:23	606-20-2	
Di-n-octylphthalate	**<0.045**	mg/kg	0.15	0.045	1	12/19/17 10:37	12/19/17 18:23	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/19/17 18:23	117-81-7	
Fluoranthene	**<0.028**	mg/kg	0.094	0.028	1	12/19/17 10:37	12/19/17 18:23	206-44-0	
Fluorene	**<0.023**	mg/kg	0.078	0.023	1	12/19/17 10:37	12/19/17 18:23	86-73-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (7-14') **Lab ID: 40162435009** Collected: 12/13/17 12:35 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.051**	mg/kg	0.17	0.051	1	12/19/17 10:37	12/19/17 18:23	87-68-3	
Hexachlorobenzene	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/19/17 18:23	118-74-1	
Hexachlorocyclopentadiene	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/19/17 18:23	77-47-4	
Hexachloroethane	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/19/17 18:23	67-72-1	
Indeno(1,2,3-cd)pyrene	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/19/17 18:23	193-39-5	
Isophorone	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/19/17 18:23	78-59-1	
2-Methylnaphthalene	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/19/17 18:23	91-57-6	
2-Methylphenol(o-Cresol)	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/19/17 18:23	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/19/17 18:23		
Naphthalene	**<0.070**	mg/kg	0.23	0.070	1	12/19/17 10:37	12/19/17 18:23	91-20-3	
2-Nitroaniline	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/19/17 18:23	88-74-4	
3-Nitroaniline	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/19/17 18:23	99-09-2	
4-Nitroaniline	**<0.083**	mg/kg	0.28	0.083	1	12/19/17 10:37	12/19/17 18:23	100-01-6	
Nitrobenzene	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/19/17 18:23	98-95-3	
2-Nitrophenol	**<0.063**	mg/kg	0.21	0.063	1	12/19/17 10:37	12/19/17 18:23	88-75-5	
4-Nitrophenol	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/19/17 18:23	100-02-7	
N-Nitroso-di-n-propylamine	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/19/17 18:23	621-64-7	
N-Nitrosodiphenylamine	**<0.27**	mg/kg	0.91	0.27	1	12/19/17 10:37	12/19/17 18:23	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/19/17 18:23	108-60-1	
Pentachlorophenol	**<0.044**	mg/kg	0.15	0.044	1	12/19/17 10:37	12/19/17 18:23	87-86-5	
Phenanthrene	**<0.026**	mg/kg	0.086	0.026	1	12/19/17 10:37	12/19/17 18:23	85-01-8	
Phenol	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/19/17 18:23	108-95-2	
Pyrene	**<0.044**	mg/kg	0.15	0.044	1	12/19/17 10:37	12/19/17 18:23	129-00-0	
1,2,4-Trichlorobenzene	**<0.023**	mg/kg	0.075	0.023	1	12/19/17 10:37	12/19/17 18:23	120-82-1	
2,4,5-Trichlorophenol	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/19/17 18:23	95-95-4	
2,4,6-Trichlorophenol	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/19/17 18:23	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	31	%	13-114		1	12/19/17 10:37	12/19/17 18:23	4165-60-0	
2-Fluorobiphenyl (S)	30	%	18-127		1	12/19/17 10:37	12/19/17 18:23	321-60-8	
Terphenyl-d14 (S)	39	%	41-109		1	12/19/17 10:37	12/19/17 18:23	1718-51-0	S0
Phenol-d6 (S)	32	%	30-97		1	12/19/17 10:37	12/19/17 18:23	13127-88-3	
2-Fluorophenol (S)	31	%	16-103		1	12/19/17 10:37	12/19/17 18:23	367-12-4	
2,4,6-Tribromophenol (S)	26	%	13-143		1	12/19/17 10:37	12/19/17 18:23	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.047**	mg/kg	0.027	0.0080	1	12/18/17 05:00	12/18/17 14:01	67-64-1	
Benzene	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 14:01	71-43-2	
Bromodichloromethane	**<0.0028**	mg/kg	0.0092	0.0028	1	12/18/17 05:00	12/18/17 14:01	75-27-4	
Bromoform	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 14:01	75-25-2	
Bromomethane	**<0.0063**	mg/kg	0.021	0.0063	1	12/18/17 05:00	12/18/17 14:01	74-83-9	
2-Butanone (MEK)	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 14:01	78-93-3	
Carbon disulfide	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 14:01	75-15-0	
Carbon tetrachloride	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 14:01	56-23-5	
Chlorobenzene	**<0.0030**	mg/kg	0.010	0.0030	1	12/18/17 05:00	12/18/17 14:01	108-90-7	
Chloroethane	**<0.0037**	mg/kg	0.012	0.0037	1	12/18/17 05:00	12/18/17 14:01	75-00-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-01-B05 (7-14') **Lab ID: 40162435009** Collected: 12/13/17 12:35 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0044**	mg/kg	0.015	0.0044	1	12/18/17 05:00	12/18/17 14:01	67-66-3	
Chloromethane	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 14:01	74-87-3	
Dibromochloromethane	**<0.0027**	mg/kg	0.0090	0.0027	1	12/18/17 05:00	12/18/17 14:01	124-48-1	
1,1-Dichloroethane	**<0.0038**	mg/kg	0.013	0.0038	1	12/18/17 05:00	12/18/17 14:01	75-34-3	
1,2-Dichloroethane	**<0.0043**	mg/kg	0.014	0.0043	1	12/18/17 05:00	12/18/17 14:01	107-06-2	
1,1-Dichloroethene	**<0.0043**	mg/kg	0.014	0.0043	1	12/18/17 05:00	12/18/17 14:01	75-35-4	
cis-1,2-Dichloroethene	**<0.0044**	mg/kg	0.015	0.0044	1	12/18/17 05:00	12/18/17 14:01	156-59-2	
trans-1,2-Dichloroethene	**<0.0044**	mg/kg	0.015	0.0044	1	12/18/17 05:00	12/18/17 14:01	156-60-5	L1
1,2-Dichloropropane	**<0.0027**	mg/kg	0.0089	0.0027	1	12/18/17 05:00	12/18/17 14:01	78-87-5	
cis-1,3-Dichloropropene	**<0.0021**	mg/kg	0.0070	0.0021	1	12/18/17 05:00	12/18/17 14:01	10061-01-5	
trans-1,3-Dichloropropene	**<0.0020**	mg/kg	0.0067	0.0020	1	12/18/17 05:00	12/18/17 14:01	10061-02-6	
Ethylbenzene	**<0.0031**	mg/kg	0.010	0.0031	1	12/18/17 05:00	12/18/17 14:01	100-41-4	
2-Hexanone	**<0.0025**	mg/kg	0.0083	0.0025	1	12/18/17 05:00	12/18/17 14:01	591-78-6	
Methylene Chloride	**<0.0041**	mg/kg	0.014	0.0041	1	12/18/17 05:00	12/18/17 14:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0027**	mg/kg	0.0091	0.0027	1	12/18/17 05:00	12/18/17 14:01	108-10-1	
Methyl-tert-butyl ether	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 14:01	1634-04-4	
Styrene	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 14:01	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0029**	mg/kg	0.0095	0.0029	1	12/18/17 05:00	12/18/17 14:01	79-34-5	
Tetrachloroethene	**<0.0037**	mg/kg	0.012	0.0037	1	12/18/17 05:00	12/18/17 14:01	127-18-4	
Toluene	**<0.0030**	mg/kg	0.0099	0.0030	1	12/18/17 05:00	12/18/17 14:01	108-88-3	
1,1,1-Trichloroethane	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/18/17 14:01	71-55-6	
1,1,2-Trichloroethane	**<0.0032**	mg/kg	0.011	0.0032	1	12/18/17 05:00	12/18/17 14:01	79-00-5	
Trichloroethene	**<0.0029**	mg/kg	0.0097	0.0029	1	12/18/17 05:00	12/18/17 14:01	79-01-6	
Vinyl acetate	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 14:01	108-05-4	
Vinyl chloride	**<0.0038**	mg/kg	0.013	0.0038	1	12/18/17 05:00	12/18/17 14:01	75-01-4	
Xylene (Total)	**<0.010**	mg/kg	0.033	0.010	1	12/18/17 05:00	12/18/17 14:01	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	112	%	70-130		1	12/18/17 05:00	12/18/17 14:01	1868-53-7	
Toluene-d8 (S)	111	%	70-130		1	12/18/17 05:00	12/18/17 14:01	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1	12/18/17 05:00	12/18/17 14:01	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.6**	%	0.10	0.10	1		12/16/17 14:41		
9045 pH Soil	Analytical Method: EPA 9045								
pH at 25 Degrees C	**7.51**	Std. Units	0.100	0.0100	1		12/18/17 11:08		H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: 277546

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte was detected in the associated leach blank at a concentration of -0.017 mg/L.
2q	Analyte was detected in the associated leach blank.
3q	Analyte was detected in the associated method blank at a concentration of -0.0082 mg/L.
4q	Analyte was detected in the associated method blank at a concentration of -0.012mg/kg
5q	Analyte was detected in the associated method blank at a concentration of -0.012mg/kg.
6q	Due to the sample matrix, DI water was added to this sample on a one to one basis and the sample was stirred before analysis.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALIFIERS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

Pace Analytical®
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UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

40162435

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	EDI / E AND E
Branch/Location:	33 W Monroe, Chicago
Project Contact:	Nick Szymanski
Phone:	312-345-1906 -147
Project Number:	0945.016
Project Name:	IDOT - Palos Hills (Kean Ave)
Project State:	IL
Sampled By (Print):	Nick Szymanski
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	nszymanski@enwdesign1.com
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: VOC	SVOC	Total Metals, pH	TCLP Metals	SPLP Metals	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	3019-01-B01 (0-7')	12-13-17	10:00	S							*	* SPLP ANALYSIS Dependent upon Initial results Hold samples AFTER INITIAL Results	3-40ml V EEF 1-4oz jp A 2-4oz ag A	
002	3019-01-B01-D (0-7')		10:00											
003	3019-01-B01 (7-14')		10:05											
004	3019-01-B02 (0-7')		9:20											
005	3019-01-B02 (7-14')		9:25											
006	3019-01-B03 (0-1')		9:35											
007	3019-01-B04 (0-1')		10:20											
008	3019-01-B05 (0-7)		12:30											
009	3019-01-B05 (7-14)		12:35											
010	3019-01-B06 (0-1)		12:05											
011	3019-01-B07 (0-1)		12:45											
012	3019-04-B01 (0-4)		11:25											
013	3019-04-B02 (0-4)		11:15											

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/13/17 13:22	Kathy Wendt	12/13/17 1322
Kathy Wendt	12/13/17 1700	C3 Logistics	12/13/17
C3 Logistics	12/14/17 0945		12/14/17 0945

PACE Project No. 40162435

Receipt Temp = 1.5 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: WO#: 40162435

40162435

Client Name: EDT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-4 **Type of Ice:** ☑ Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1 /Corr: 1.5 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☒ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 12/14/17
Initials: DS

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☑Yes	☐No		Date/Time: 12/14/17 1500 DS 12/14/17
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☐Yes	☑No	☐N/A	8. NO MS/MSD DS 12/14/17
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. All samples do not contain sample time on client labels DS 12/14/17
-Includes date/time/ID/Analysis Matrix:				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☑No	☐N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: RMR for DM **Date:** 12/14/17

Illinois Environmental Protection Agency

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

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663 Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

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

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

I. Source Location Information

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

Project Name: FAU 2721 (Kean Ave.) Office Phone Number, if available:

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

Southwest Alliance Church, 9801-9999 block of South Kean Avenue (ISGS #3019-4)

City: Palos Hills State: IL Zip Code: 60465

County: Cook Township: Palos

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

Latitude: 41.710725 (Decimal Degrees) Longitude: -87.846531 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

Google Earth

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

II. Owner/Operator Information for Source Site

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

Project Name: FAU 2721 (Kean Ave.)

Latitude: 41.710725 Longitude: -87.846531

Uncontaminated Site Certification

III. Basis for Certification and Attachments

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

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

LOCATION 3019-4-B01 WAS SAMPLED AT SITE 3019-4. SEE FIGURE 4-2 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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]:

PACE ANALYTICAL REPORT JOB ID: 40162435.
ALSO SEE ATTACHED DATA SUMMARY TABLE.

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

I, Andrew Dorn, P.E. (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: Environmental Design International

Street Address: 33 West Monroe, Suite 1825

City: Chicago State: IL Zip Code: 60603

Phone: (312) 345-1400

Andrew Dorn, P.E.
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

11/22/18
Date:

LICENSED PROFESSIONAL ENGINEER
ANDREW D. DORN
062.067314
ILLINOIS

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

Summary Table of ISGS Site No. 3019-4
PTB #176-001: Work Order 034A - IDOT Job #D-91-339-15

SITE	ISGS #3019-4 (Southwest Alliance Church)	Comparison Criteria					
BORING	3019-4-B01	MACs			TACO		
SAMPLE	3019-04-B01 (0-4)	Most Stringent	Within a MSA	Within Chciago Corporate Limits	Resdential	Construction Worker	SCGIER
MATRIX	Soil						
DEPTH (feet)	0-4						
pH	8.3						
HEADSPACE (MU)	0.0						
VOCs (mg/kg)							
Acetone	0.14	25	25	25	70,000	100,000	–
SVOCs (mg/kg)	**No Detections**						
Inorganics (mg/kg)							
Arsenic	9.3	11.3	13	–	750	61	–
Barium	56.1	1,500	1,500	–	5,500	14,000	–
Beryllium	0.64	22	22	–	160	410	–
Boron	15.9	40	40	–	16,000	41,000	–
Cadmium	0.33J	5.2	5.2	–	78	200	–
Calcium	68,200	–	--	–	–	–	–
Chromium	17.7	21	21	–	230	690	–
Cobalt	8.1	20	20	–	4,700	12,000	–
Copper	28.4	2,900	2,900	–	2,900	8,200	–
Iron	20,300 †,m	15000	15,900	–	–	–	–
Lead	26.5	107	107	–	400	700	–
Magnesium	38,000	325,000	325,000	–	325,000	730,000	–
Manganese	384	630	636	–	1,600	4,100	–
Mercury	0.034J	0.1	0.1	–	10	0.1	–
Nickel	22.6	100	100	–	1,600	4,100	–
Potassium	2,430	–	--	–	–	–	–
Selenium	ND ‡	1.3	1.3	–	390	1,000	–
Sodium	989	–	--	–	–	–	–
Thallium	ND	2.6	2.6	–	6.3	160	–
Vanadium	27.5	550	550	–	550	1,400	–
Zinc	71.2	5,100	5,100	–	23,000	61,000	–
TCLP Metals (mg/L)							
Antimony	ND ‡	–	--	–	–	–	0.006
Barium	0.38	–	--	–	–	–	2
Boron	0.093J	–	--	–	–	–	2
Cadmium	0.0014J	–	--	–	–	–	0.005
Cobalt	0.015	–	--	–	–	–	1
Iron	0.11	–	--	–	–	–	5
Lead	0.0044J	–	--	–	–	–	0.0075
Manganese	2.4 L	–	--	–	–	–	0.15
Nickel	0.019	–	--	–	–	–	0.1
Thallium	ND ‡	–	--	–	–	–	0.002
Zinc	0.017J	–	--	–	–	–	5
SPLP Metals (mg/L)							
Manganese	0.75 L	–	--	–	–	–	0.15

Notes:

– Not Applicable (Comparison Criteria)
\# pH is less than 6.25 or greater than 9.0 standard units
† Concentration exceeds the most stringent MAC (or the only MAC for COCs with only one)
* Concentration exceeds the MAC for Chicago corporate limits
m Concentration exceeds the MAC for an MSA
r Concentration exceeds a TACO Tier 1 soil RO for residenital properties
c Concentration exceeds a TACO Tier 1 RO for the Construction Worker Exposure Route
L The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER
MAC Maximum Allowable Concentrtajons of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations

J Estimated Value
NA Analyte was not analyzed
ND Analyte was not detected above the method detection limit
‡ Detection limit was above reference concentrations
MSA Metropolitan Statistical Area
SCGIER Soil Component of the Groundwater Ingestion Exposure Route
Concentration exceeds applicable comparison criteria
Concentration exceeds the most stringent MAC, but is below the MAC for an MSA

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 04, 2018

Nick Szymanski
Environmental Design International
33 West Monroe
Suite 1825
Chicago, IL 60603

RE: Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Dear Nick Szymanski:
Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REVISED REPORT: SPLP Metals have been added.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40162435001	3019-01-B01 (0-7')	Solid	12/13/17 10:00	12/14/17 09:45
40162435002	3019-01-B01-D (0-7')	Solid	12/13/17 10:00	12/14/17 09:45
40162435003	3019-01-BO1 (7-14')	Solid	12/13/17 10:05	12/14/17 09:45
40162435004	3019-01-B02 (0-7')	Solid	12/13/17 09:20	12/14/17 09:45
40162435005	3019-01-B02 (7-14')	Solid	12/13/17 09:25	12/14/17 09:45
40162435006	3019-01-B03 (0-1')	Solid	12/13/17 09:35	12/14/17 09:45
40162435007	3019-01-B04 (0-1')	Solid	12/13/17 10:20	12/14/17 09:45
40162435008	3019-01-B05 (0-7')	Solid	12/13/17 12:30	12/14/17 09:45
40162435009	3019-01-B05 (7-14')	Solid	12/13/17 12:35	12/14/17 09:45
40162435010	3019-01-B06 (0-1')	Solid	12/13/17 12:05	12/14/17 09:45
40162435011	3019-01-B07 (0-1')	Solid	12/13/17 12:45	12/14/17 09:45
40162435012	3019-04-B01 (0-4)	Solid	12/13/17 11:25	12/14/17 09:45
40162435013	3019-04-B02 (0-4)	Solid	12/13/17 11:15	12/14/17 09:45
40162435014	3019-05-B01 (0-7)	Solid	12/13/17 11:40	12/14/17 09:45
40162435015	3019-05-B01-D (0-7)	Solid	12/13/17 11:40	12/14/17 09:45
40162435016	3019-05-B01 (7-10')	Solid	12/13/17 11:45	12/14/17 09:45
40162435017	3019-05-B02 (0-1)	Solid	12/13/17 11:55	12/14/17 09:45

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	DXS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435010	**3019-01-B06 (0-1')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435011	**3019-01-B07 (0-1')**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9045	ALY	1	PASI-G
40162435012	**3019-04-B01 (0-4)**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435013	**3019-04-B02 (0-4)**	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435011	**3019-01-B07 (0-1')**					
EPA 6010	Beryllium	0.44J	mg/kg	0.46	12/19/17 12:11	
EPA 6010	Boron	15.3	mg/kg	4.6	12/19/17 12:11	
EPA 6010	Cadmium	0.57J	mg/kg	0.57	12/19/17 12:11	
EPA 6010	Calcium	49000	mg/kg	57.0	12/19/17 12:11	
EPA 6010	Chromium	14.0	mg/kg	1.1	12/19/17 12:11	
EPA 6010	Cobalt	6.4	mg/kg	0.57	12/19/17 12:11	
EPA 6010	Copper	27.6	mg/kg	2.8	12/19/17 12:11	
EPA 6010	Iron	16900	mg/kg	11.4	12/19/17 12:11	
EPA 6010	Lead	118	mg/kg	1.5	12/19/17 12:11	
EPA 6010	Magnesium	30400	mg/kg	114	12/19/17 12:11	
EPA 6010	Manganese	299	mg/kg	1.1	12/19/17 12:11	
EPA 6010	Nickel	17.7	mg/kg	1.1	12/19/17 12:11	
EPA 6010	Potassium	1910	mg/kg	114	12/19/17 12:11	
EPA 6010	Sodium	784	mg/kg	57.0	12/19/17 12:11	
EPA 6010	Vanadium	17.9	mg/kg	1.1	12/19/17 12:11	
EPA 6010	Zinc	109	mg/kg	4.6	12/19/17 12:11	
EPA 6010	Lead	0.32	mg/L	0.013	01/03/18 12:41	
EPA 6010	Manganese	0.42	mg/L	0.0055	01/03/18 12:41	
EPA 6010	Barium	0.53	mg/L	0.015	12/20/17 13:13	
EPA 6010	Boron	0.20	mg/L	0.15	12/20/17 13:13	
EPA 6010	Cadmium	0.0032J	mg/L	0.0050	12/20/17 13:13	
EPA 6010	Cobalt	0.022	mg/L	0.0050	12/20/17 13:13	
EPA 6010	Iron	0.074J	mg/L	0.10	12/20/17 13:13	
EPA 6010	Lead	0.0076J	mg/L	0.013	12/20/17 13:13	2q
EPA 6010	Manganese	2.0	mg/L	0.0055	12/20/17 13:13	
EPA 6010	Nickel	0.027	mg/L	0.010	12/20/17 13:13	
EPA 6010	Zinc	0.081	mg/L	0.040	12/20/17 13:13	
EPA 7471	Mercury	0.022J	mg/kg	0.040	12/20/17 12:00	4q
EPA 8270	Benzo(a)anthracene	0.16J	mg/kg	0.40	12/20/17 19:14	
EPA 8270	Benzo(a)pyrene	0.17J	mg/kg	0.39	12/20/17 19:14	
EPA 8270	Benzo(b)fluoranthene	0.21J	mg/kg	0.44	12/20/17 19:14	
EPA 8270	Chrysene	0.22J	mg/kg	0.38	12/20/17 19:14	
EPA 8270	Fluoranthene	0.42	mg/kg	0.36	12/20/17 19:14	
EPA 8270	Phenanthrene	0.19J	mg/kg	0.33	12/20/17 19:14	
EPA 8270	Pyrene	0.32J	mg/kg	0.57	12/20/17 19:14	
EPA 8260	Acetone	0.10	mg/kg	0.028	12/18/17 14:47	
ASTM D2974-87	Percent Moisture	13.1	%	0.10	12/16/17 14:43	
EPA 9045	pH at 25 Degrees C	8.92	Std. Units	0.100	12/18/17 11:10	H6
40162435012	**3019-04-B01 (0-4)**					
EPA 6010	Arsenic	9.3	mg/kg	6.3	12/19/17 12:13	
EPA 6010	Barium	56.1	mg/kg	0.63	12/19/17 12:13	
EPA 6010	Beryllium	0.64	mg/kg	0.51	12/19/17 12:13	
EPA 6010	Boron	15.9	mg/kg	5.1	12/19/17 12:13	
EPA 6010	Cadmium	0.33J	mg/kg	0.63	12/19/17 12:13	
EPA 6010	Calcium	68200	mg/kg	634	12/19/17 15:14	
EPA 6010	Chromium	17.7	mg/kg	1.3	12/19/17 12:13	
EPA 6010	Cobalt	8.1	mg/kg	0.63	12/19/17 12:13	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435012	**3019-04-B01 (0-4)**					
EPA 6010	Copper	28.4	mg/kg	3.2	12/19/17 12:13	
EPA 6010	Iron	20300	mg/kg	12.7	12/19/17 12:13	
EPA 6010	Lead	26.5	mg/kg	1.6	12/19/17 12:13	
EPA 6010	Magnesium	38000	mg/kg	127	12/19/17 12:13	
EPA 6010	Manganese	384	mg/kg	1.3	12/19/17 12:13	
EPA 6010	Nickel	22.6	mg/kg	1.3	12/19/17 12:13	
EPA 6010	Potassium	2430	mg/kg	127	12/19/17 12:13	
EPA 6010	Sodium	989	mg/kg	63.4	12/19/17 12:13	
EPA 6010	Vanadium	27.5	mg/kg	1.3	12/19/17 12:13	
EPA 6010	Zinc	71.2	mg/kg	5.1	12/19/17 12:13	
EPA 6010	Manganese	0.75	mg/L	0.0055	01/03/18 12:43	
EPA 6010	Barium	0.38	mg/L	0.015	12/20/17 13:15	
EPA 6010	Boron	0.093J	mg/L	0.15	12/20/17 13:15	
EPA 6010	Cadmium	0.0014J	mg/L	0.0050	12/20/17 13:15	
EPA 6010	Cobalt	0.015	mg/L	0.0050	12/20/17 13:15	
EPA 6010	Iron	0.11	mg/L	0.10	12/20/17 13:15	
EPA 6010	Lead	0.0044J	mg/L	0.013	12/20/17 13:15	2q
EPA 6010	Manganese	2.4	mg/L	0.0055	12/20/17 13:15	
EPA 6010	Nickel	0.019	mg/L	0.010	12/20/17 13:15	
EPA 6010	Zinc	0.017J	mg/L	0.040	12/20/17 13:15	
EPA 7471	Mercury	0.034J	mg/kg	0.047	12/20/17 12:07	4q
EPA 8260	Acetone	0.14	mg/kg	0.035	12/18/17 15:10	
ASTM D2974-87	Percent Moisture	24.6	%	0.10	12/16/17 14:43	
EPA 9040	pH at 25 Degrees C	8.3	Std. Units	0.10	12/19/17 12:43	6q,H6
40162435013	**3019-04-B02 (0-4)**					
EPA 6010	Arsenic	17.4	mg/kg	5.9	12/19/17 12:16	
EPA 6010	Barium	23.7	mg/kg	0.59	12/19/17 12:16	
EPA 6010	Beryllium	0.31J	mg/kg	0.47	12/19/17 12:16	
EPA 6010	Boron	18.5	mg/kg	4.7	12/19/17 12:16	
EPA 6010	Cadmium	0.41J	mg/kg	0.59	12/19/17 12:16	
EPA 6010	Calcium	129000	mg/kg	589	12/19/17 15:16	
EPA 6010	Chromium	14.3	mg/kg	1.2	12/19/17 12:16	
EPA 6010	Cobalt	7.1	mg/kg	0.59	12/19/17 12:16	
EPA 6010	Copper	22.4	mg/kg	2.9	12/19/17 12:16	
EPA 6010	Iron	17800	mg/kg	11.8	12/19/17 12:16	
EPA 6010	Lead	46.1	mg/kg	1.5	12/19/17 12:16	
EPA 6010	Magnesium	75600	mg/kg	1180	12/19/17 15:16	
EPA 6010	Manganese	489	mg/kg	1.2	12/19/17 12:16	
EPA 6010	Nickel	20.3	mg/kg	1.2	12/19/17 12:16	
EPA 6010	Potassium	2010	mg/kg	118	12/19/17 12:16	
EPA 6010	Sodium	279	mg/kg	58.9	12/19/17 12:16	
EPA 6010	Vanadium	17.6	mg/kg	1.2	12/19/17 12:16	
EPA 6010	Zinc	75.2	mg/kg	4.7	12/19/17 12:16	
EPA 6010	Lead	0.020	mg/L	0.013	01/03/18 12:45	
EPA 6010	Manganese	0.13	mg/L	0.0055	01/03/18 12:45	
EPA 6010	Barium	0.44	mg/L	0.015	12/20/17 13:18	
EPA 6010	Boron	0.083J	mg/L	0.15	12/20/17 13:18	

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-04-B01 (0-4) **Lab ID: 40162435012** Collected: 12/13/17 11:25 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<1.0**	mg/kg	3.2	1.0	1	12/18/17 11:34	12/19/17 12:13	7440-36-0	
Arsenic	**9.3**	mg/kg	6.3	1.3	1	12/18/17 11:34	12/19/17 12:13	7440-38-2	
Barium	**56.1**	mg/kg	0.63	0.19	1	12/18/17 11:34	12/19/17 12:13	7440-39-3	
Beryllium	**0.64**	mg/kg	0.51	0.15	1	12/18/17 11:34	12/19/17 12:13	7440-41-7	
Boron	**15.9**	mg/kg	5.1	0.84	1	12/18/17 11:34	12/19/17 12:13	7440-42-8	
Cadmium	**0.33J**	mg/kg	0.63	0.17	1	12/18/17 11:34	12/19/17 12:13	7440-43-9	
Calcium	**68200**	mg/kg	634	124	10	12/18/17 11:34	12/19/17 15:14	7440-70-2	
Chromium	**17.7**	mg/kg	1.3	0.35	1	12/18/17 11:34	12/19/17 12:13	7440-47-3	
Cobalt	**8.1**	mg/kg	0.63	0.18	1	12/18/17 11:34	12/19/17 12:13	7440-48-4	
Copper	**28.4**	mg/kg	3.2	1.0	1	12/18/17 11:34	12/19/17 12:13	7440-50-8	
Iron	**20300**	mg/kg	12.7	2.0	1	12/18/17 11:34	12/19/17 12:13	7439-89-6	
Lead	**26.5**	mg/kg	1.6	0.55	1	12/18/17 11:34	12/19/17 12:13	7439-92-1	
Magnesium	**38000**	mg/kg	127	14.6	1	12/18/17 11:34	12/19/17 12:13	7439-95-4	
Manganese	**384**	mg/kg	1.3	0.32	1	12/18/17 11:34	12/19/17 12:13	7439-96-5	
Nickel	**22.6**	mg/kg	1.3	0.29	1	12/18/17 11:34	12/19/17 12:13	7440-02-0	
Potassium	**2430**	mg/kg	127	20.2	1	12/18/17 11:34	12/19/17 12:13	7440-09-7	
Selenium	**<1.4**	mg/kg	6.3	1.4	1	12/18/17 11:34	12/19/17 12:13	7782-49-2	
Silver	**<0.44**	mg/kg	1.3	0.44	1	12/18/17 11:34	12/19/17 12:13	7440-22-4	
Sodium	**989**	mg/kg	63.4	13.2	1	12/18/17 11:34	12/19/17 12:13	7440-23-5	
Thallium	**<0.98**	mg/kg	5.1	0.98	1	12/18/17 11:34	12/19/17 12:13	7440-28-0	
Vanadium	**27.5**	mg/kg	1.3	0.28	1	12/18/17 11:34	12/19/17 12:13	7440-62-2	
Zinc	**71.2**	mg/kg	5.1	1.2	1	12/18/17 11:34	12/19/17 12:13	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Manganese	**0.75**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:43	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:15	7440-36-0	
Barium	**0.38**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:15	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:15	7440-41-7	
Boron	**0.093J**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:15	7440-42-8	
Cadmium	**0.0014J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:15	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:15	7440-47-3	
Cobalt	**0.015**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:15	7440-48-4	
Iron	**0.11**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:15	7439-89-6	
Lead	**0.0044J**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:15	7439-92-1	2q
Manganese	**2.4**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:15	7439-96-5	
Nickel	**0.019**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:15	7440-02-0	
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:15	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:15	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:15	7440-28-0	1q,3q
Zinc	**0.017J**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:15	7440-66-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-04-B01 (0-4) **Lab ID: 40162435012** Collected: 12/13/17 11:25 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 10:09	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.034J**	mg/kg	0.047	0.014	1	12/20/17 06:44	12/20/17 12:07	7439-97-6	4q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.079**	mg/kg	0.26	0.079	1	12/19/17 10:37	12/20/17 11:23	83-32-9	
Acenaphthylene	**<0.079**	mg/kg	0.26	0.079	1	12/19/17 10:37	12/20/17 11:23	208-96-8	
Anthracene	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 11:23	120-12-7	
Benzo(a)anthracene	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 11:23	56-55-3	
Benzo(a)pyrene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 11:23	50-32-8	
Benzo(b)fluoranthene	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/20/17 11:23	205-99-2	
Benzo(g,h,i)perylene	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/20/17 11:23	191-24-2	
Benzo(k)fluoranthene	**<0.053**	mg/kg	0.18	0.053	1	12/19/17 10:37	12/20/17 11:23	207-08-9	
4-Bromophenylphenyl ether	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 11:23	101-55-3	
Butylbenzylphthalate	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 11:23	85-68-7	
Carbazole	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 11:23	86-74-8	
4-Chloro-3-methylphenol	**<0.069**	mg/kg	0.23	0.069	1	12/19/17 10:37	12/20/17 11:23	59-50-7	
4-Chloroaniline	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 11:23	106-47-8	
bis(2-Chloroethoxy)methane	**<0.060**	mg/kg	0.20	0.060	1	12/19/17 10:37	12/20/17 11:23	111-91-1	
bis(2-Chloroethyl) ether	**<0.069**	mg/kg	0.23	0.069	1	12/19/17 10:37	12/20/17 11:23	111-44-4	
2-Chloronaphthalene	**<0.028**	mg/kg	0.095	0.028	1	12/19/17 10:37	12/20/17 11:23	91-58-7	
2-Chlorophenol	**<0.055**	mg/kg	0.18	0.055	1	12/19/17 10:37	12/20/17 11:23	95-57-8	
4-Chlorophenylphenyl ether	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/20/17 11:23	7005-72-3	
Chrysene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 11:23	218-01-9	
Dibenz(a,h)anthracene	**<0.060**	mg/kg	0.20	0.060	1	12/19/17 10:37	12/20/17 11:23	53-70-3	
Dibenzofuran	**<0.027**	mg/kg	0.089	0.027	1	12/19/17 10:37	12/20/17 11:23	132-64-9	
1,2-Dichlorobenzene	**<0.070**	mg/kg	0.23	0.070	1	12/19/17 10:37	12/20/17 11:23	95-50-1	
1,3-Dichlorobenzene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 11:23	541-73-1	
1,4-Dichlorobenzene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 11:23	106-46-7	
3,3'-Dichlorobenzidine	**<0.060**	mg/kg	0.20	0.060	1	12/19/17 10:37	12/20/17 11:23	91-94-1	
2,4-Dichlorophenol	**<0.059**	mg/kg	0.20	0.059	1	12/19/17 10:37	12/20/17 11:23	120-83-2	
Diethylphthalate	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 11:23	84-66-2	
2,4-Dimethylphenol	**<0.044**	mg/kg	0.15	0.044	1	12/19/17 10:37	12/20/17 11:23	105-67-9	
Dimethylphthalate	**<0.029**	mg/kg	0.096	0.029	1	12/19/17 10:37	12/20/17 11:23	131-11-3	
Di-n-butylphthalate	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 11:23	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.068**	mg/kg	0.23	0.068	1	12/19/17 10:37	12/20/17 11:23	534-52-1	
2,4-Dinitrophenol	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/20/17 11:23	51-28-5	
2,4-Dinitrotoluene	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 11:23	121-14-2	
2,6-Dinitrotoluene	**<0.042**	mg/kg	0.14	0.042	1	12/19/17 10:37	12/20/17 11:23	606-20-2	
Di-n-octylphthalate	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/20/17 11:23	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 11:23	117-81-7	
Fluoranthene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 11:23	206-44-0	
Fluorene	**<0.026**	mg/kg	0.086	0.026	1	12/19/17 10:37	12/20/17 11:23	86-73-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-04-B01 (0-4) **Lab ID: 40162435012** Collected: 12/13/17 11:25 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 11:23	87-68-3	
Hexachlorobenzene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 11:23	118-74-1	
Hexachlorocyclopentadiene	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/20/17 11:23	77-47-4	
Hexachloroethane	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 11:23	67-72-1	
Indeno(1,2,3-cd)pyrene	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 11:23	193-39-5	
Isophorone	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 11:23	78-59-1	
2-Methylnaphthalene	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/20/17 11:23	91-57-6	
2-Methylphenol(o-Cresol)	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 11:23	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/20/17 11:23		
Naphthalene	**<0.077**	mg/kg	0.26	0.077	1	12/19/17 10:37	12/20/17 11:23	91-20-3	
2-Nitroaniline	**<0.063**	mg/kg	0.21	0.063	1	12/19/17 10:37	12/20/17 11:23	88-74-4	
3-Nitroaniline	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/20/17 11:23	99-09-2	
4-Nitroaniline	**<0.092**	mg/kg	0.31	0.092	1	12/19/17 10:37	12/20/17 11:23	100-01-6	
Nitrobenzene	**<0.045**	mg/kg	0.15	0.045	1	12/19/17 10:37	12/20/17 11:23	98-95-3	
2-Nitrophenol	**<0.070**	mg/kg	0.23	0.070	1	12/19/17 10:37	12/20/17 11:23	88-75-5	
4-Nitrophenol	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 11:23	100-02-7	
N-Nitroso-di-n-propylamine	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 11:23	621-64-7	
N-Nitrosodiphenylamine	**<0.30**	mg/kg	1.0	0.30	1	12/19/17 10:37	12/20/17 11:23	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 11:23	108-60-1	
Pentachlorophenol	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 11:23	87-86-5	
Phenanthrene	**<0.028**	mg/kg	0.095	0.028	1	12/19/17 10:37	12/20/17 11:23	85-01-8	
Phenol	**<0.053**	mg/kg	0.18	0.053	1	12/19/17 10:37	12/20/17 11:23	108-95-2	
Pyrene	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 11:23	129-00-0	
1,2,4-Trichlorobenzene	**<0.025**	mg/kg	0.083	0.025	1	12/19/17 10:37	12/20/17 11:23	120-82-1	
2,4,5-Trichlorophenol	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/20/17 11:23	95-95-4	
2,4,6-Trichlorophenol	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 11:23	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	47	%	13-114		1	12/19/17 10:37	12/20/17 11:23	4165-60-0	
2-Fluorobiphenyl (S)	51	%	18-127		1	12/19/17 10:37	12/20/17 11:23	321-60-8	
Terphenyl-d14 (S)	69	%	41-109		1	12/19/17 10:37	12/20/17 11:23	1718-51-0	
Phenol-d6 (S)	48	%	30-97		1	12/19/17 10:37	12/20/17 11:23	13127-88-3	
2-Fluorophenol (S)	47	%	16-103		1	12/19/17 10:37	12/20/17 11:23	367-12-4	
2,4,6-Tribromophenol (S)	52	%	13-143		1	12/19/17 10:37	12/20/17 11:23	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.14**	mg/kg	0.035	0.011	1	12/18/17 05:00	12/18/17 15:10	67-64-1	
Benzene	**<0.0052**	mg/kg	0.017	0.0052	1	12/18/17 05:00	12/18/17 15:10	71-43-2	
Bromodichloromethane	**<0.0037**	mg/kg	0.012	0.0037	1	12/18/17 05:00	12/18/17 15:10	75-27-4	
Bromoform	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 15:10	75-25-2	
Bromomethane	**<0.0084**	mg/kg	0.028	0.0084	1	12/18/17 05:00	12/18/17 15:10	74-83-9	
2-Butanone (MEK)	**<0.0052**	mg/kg	0.017	0.0052	1	12/18/17 05:00	12/18/17 15:10	78-93-3	
Carbon disulfide	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/18/17 15:10	75-15-0	
Carbon tetrachloride	**<0.0056**	mg/kg	0.019	0.0056	1	12/18/17 05:00	12/18/17 15:10	56-23-5	
Chlorobenzene	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 15:10	108-90-7	
Chloroethane	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 15:10	75-00-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-04-B01 (0-4) **Lab ID: 40162435012** Collected: 12/13/17 11:25 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0059**	mg/kg	0.020	0.0059	1	12/18/17 05:00	12/18/17 15:10	67-66-3	
Chloromethane	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 15:10	74-87-3	
Dibromochloromethane	**<0.0036**	mg/kg	0.012	0.0036	1	12/18/17 05:00	12/18/17 15:10	124-48-1	
1,1-Dichloroethane	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/18/17 15:10	75-34-3	
1,2-Dichloroethane	**<0.0057**	mg/kg	0.019	0.0057	1	12/18/17 05:00	12/18/17 15:10	107-06-2	
1,1-Dichloroethene	**<0.0058**	mg/kg	0.019	0.0058	1	12/18/17 05:00	12/18/17 15:10	75-35-4	
cis-1,2-Dichloroethene	**<0.0058**	mg/kg	0.019	0.0058	1	12/18/17 05:00	12/18/17 15:10	156-59-2	
trans-1,2-Dichloroethene	**<0.0059**	mg/kg	0.020	0.0059	1	12/18/17 05:00	12/18/17 15:10	156-60-5	L1
1,2-Dichloropropane	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 15:10	78-87-5	
cis-1,3-Dichloropropene	**<0.0028**	mg/kg	0.0093	0.0028	1	12/18/17 05:00	12/18/17 15:10	10061-01-5	
trans-1,3-Dichloropropene	**<0.0027**	mg/kg	0.0089	0.0027	1	12/18/17 05:00	12/18/17 15:10	10061-02-6	
Ethylbenzene	**<0.0041**	mg/kg	0.014	0.0041	1	12/18/17 05:00	12/18/17 15:10	100-41-4	
2-Hexanone	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 15:10	591-78-6	
Methylene Chloride	**<0.0054**	mg/kg	0.018	0.0054	1	12/18/17 05:00	12/18/17 15:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0036**	mg/kg	0.012	0.0036	1	12/18/17 05:00	12/18/17 15:10	108-10-1	
Methyl-tert-butyl ether	**<0.0056**	mg/kg	0.019	0.0056	1	12/18/17 05:00	12/18/17 15:10	1634-04-4	
Styrene	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 15:10	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0038**	mg/kg	0.013	0.0038	1	12/18/17 05:00	12/18/17 15:10	79-34-5	
Tetrachloroethene	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/18/17 15:10	127-18-4	
Toluene	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 15:10	108-88-3	
1,1,1-Trichloroethane	**<0.0060**	mg/kg	0.020	0.0060	1	12/18/17 05:00	12/18/17 15:10	71-55-6	
1,1,2-Trichloroethane	**<0.0043**	mg/kg	0.014	0.0043	1	12/18/17 05:00	12/18/17 15:10	79-00-5	
Trichloroethene	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 15:10	79-01-6	
Vinyl acetate	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/18/17 15:10	108-05-4	
Vinyl chloride	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/18/17 15:10	75-01-4	
Xylene (Total)	**<0.013**	mg/kg	0.044	0.013	1	12/18/17 05:00	12/18/17 15:10	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	111	%	70-130		1	12/18/17 05:00	12/18/17 15:10	1868-53-7	
Toluene-d8 (S)	110	%	70-130		1	12/18/17 05:00	12/18/17 15:10	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1	12/18/17 05:00	12/18/17 15:10	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.6**	%	0.10	0.10	1		12/16/17 14:43		
9040 pH	Analytical Method: EPA 9040								
pH at 25 Degrees C	**8.3**	Std. Units	0.10	0.010	1		12/19/17 12:43		6q,H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: 277546

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte was detected in the associated leach blank at a concentration of -0.017 mg/L.
2q	Analyte was detected in the associated leach blank.
3q	Analyte was detected in the associated method blank at a concentration of -0.0082 mg/L.
4q	Analyte was detected in the associated method blank at a concentration of -0.012mg/kg
5q	Analyte was detected in the associated method blank at a concentration of -0.012mg/kg.
6q	Due to the sample matrix, DI water was added to this sample on a one to one basis and the sample was stirred before analysis.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALIFIERS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

40162435

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	EDI / E AND E
Branch/Location:	33 W Monroe, Chicago
Project Contact:	Nick Szymanski
Phone:	312-345-1906 -147
Project Number:	0945.016
Project Name:	IDOT - Palos Hills (Kean Ave)
Project State:	IL
Sampled By (Print):	Nick Szymanski
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	nszymanski@enwdesign1.com
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	Analyses Requested: VOC	SVOC	Total Metals, pH	TCLP Metals	SPLP Metals	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	3019-01-B01 (0-7')	12-13-17	10:00	S							*	* SPLP ANALYSIS Dependent upon Initial results Hold samples AFTER INITIAL Results	3-40ml V EEF 1-4oz jp A 2-4oz ag A	
002	3019-01-B01-D (0-7')		10:00											
003	3019-01-B01 (7-14')		10:05											
004	3019-01-B02 (0-7')		9:20											
005	3019-01-B02 (7-14')		9:25											
006	3019-01-B03 (0-1')		9:35											
007	3019-01-B04 (0-1')		10:20											
008	3019-01-B05 (0-7)		12:30											
009	3019-01-B05 (7-14)		12:35											
010	3019-01-B06 (0-1)		12:05											
011	3019-01-B07 (0-1)		12:45											
012	3019-04-B01 (0-4)		11:25											
013	3019-04-B02 (0-4)		11:15											

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/13/17 13:22	Kathy Wendt	12/13/17 1322
Kathy Wendt	12/13/17 1700	C3 Logistics	12/13/17
C3 Logistics	12/14/17 0945		12/14/17 0945

PACE Project No. 40162435

Receipt Temp = 1.5 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: WO#: 40162435

40162435

Client Name: EDT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-4 **Type of Ice:** ☑ Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1 /Corr: 1.5 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☒ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 12/14/17
Initials: DS

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☑Yes	☐No		Date/Time: 12/14/17 1500 DS 12/14/17
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☐Yes	☑No	☐N/A	8. NO MS/MSD DS 12/14/17
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. All samples do not contain sample time on client labels DS 12/14/17
-Includes date/time/ID/Analysis Matrix:				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☑No	☐N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: RMR for DM **Date:** 12/14/17

Illinois Environmental Protection Agency

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

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663 Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

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

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

I. Source Location Information

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

Project Name: FAU 2721 (Kean Ave.) Office Phone Number, if available:

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

Southwest Alliance Church, 9801-9999 block of South Kean Avenue (ISGS #3019-4)

City: Palos Hills State: IL Zip Code: 60465

County: Cook Township: Palos

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

Latitude: 41.710622 (Decimal Degrees) Longitude: -87.846528 (-Decimal Degrees)

Identify how the lat/long data were determined:

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

Google Earth

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

II. Owner/Operator Information for Source Site

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

Project Name: FAU 2721 (Kean Ave.)

Latitude: 41.710622 Longitude: -87.846528

Uncontaminated Site Certification

III. Basis for Certification and Attachments

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

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

LOCATION 3019-5-B01 WAS SAMPLED AT SITE 3019-5. SEE FIGURE 4-2 AND TABLE 4-1 OF THE FINAL PRELIMINARY SITE INVESTIGATION REPORT FOR SAMPLING DETAILS.

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]:

PACE ANALYTICAL REPORT JOB ID: 40162435.
ALSO SEE ATTACHED DATA SUMMARY TABLE.

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

I, Andrew Dorn, P.E. (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: Environmental Design International

Street Address: 33 West Monroe, Suite 1825

City: Chicago State: IL Zip Code: 60603

Phone: (312) 345-1400

Andrew Dorn, P.E.
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

1/22/18
Date:

LICENSED PROFESSIONAL ENGINEER
ANDREW D. DORN
062.067314
STATE OF ILLINOIS

Seal:

Summary Table of ISGS Site No. 3019-5
PTB #176-001: Work Order 034A - IDOT Job #D-91-339-15

SITE	ISGS #3019-5 (Residences)			Comparison Criteria					
BORING	3019-5-B01			MACs			TACO		
SAMPLE	3019-05-B01 (0-7)	3019-05-B01-D (0-7)	3019-05-B01 (7-10')	Most Stringent	Within a MSA	Within Chciago Corporate Limits	Resdential	Construction Worker	SCGIER
MATRIX	Soil	Soil	Soil						
DEPTH (feet)	0-7	0-7	7-14						
pH	8.4	8.3	6.9						
HEADSPACE (MU)	0.0								
VOCs (mg/kg)									
Acetone	0.097	0.13	0.13	25	25	25	70,000	100,000	–
SVOCs (mg/kg)	No Detections								
Inorganics (mg/kg)									
Antimony	ND	ND	ND	5	5	--	31	82	–
Arsenic	12.4 †	5.8J	6.7J	11.3	13	--	750	61	–
Barium	68.4	99.5	97.3	1,500	1,500	--	5,500	14,000	–
Beryllium	0.81	0.98	0.79	22	22	--	160	410	–
Boron	19.6	12.5	9.0	40	40	--	16,000	41,000	–
Cadmium	0.33J	0.48J	0.43J	5.2	5.2	--	78	200	–
Calcium	18,900	4,600	5,210	--	--	--	--	--	–
Chromium	22.5 †	24.8 †	28.5 †	21	21	--	230	690	–
Cobalt	9.6	8.8	11.2	20	20	--	4,700	12,000	–
Copper	30.0	36.3	47.5	2,900	2,900	--	2,900	8,200	–
Iron	24,200 †,m	20,800 †,m	27,200 †,m	15000	15,900	--	--	--	–
Lead	34.7	21.6	16.7	107	107	--	400	700	–
Magnesium	13,400	4,820	4,780	325,000	325,000	--	325,000	730,000	–
Manganese	281	176	120	630	636	--	1,600	4,100	–
Mercury	0.059	0.052	0.045J	0.1	0.1	--	10	0.1	–
Nickel	27.3	29.5	37.0	100	100	--	1,600	4,100	–
Potassium	2,550	2,800	2,100	--	--	--	--	--	–
Selenium	ND	ND	3.2J †	1.3	1.3	--	390	1,000	–
Sodium	1,110	1,370	932	--	--	--	--	--	–
Thallium	ND	ND	ND	2.6	2.6	--	6.3	160	–
Vanadium	30.6	33.6	54.5	550	550	--	550	1,400	–
Zinc	75.5	75.5	93.4	5,100	5,100	--	23,000	61,000	–
TCLP Metals (mg/L)									
Antimony	ND ‡	ND ‡	ND ‡	--	--	--	--	--	0.006
Barium	0.46	0.30	0.32	--	--	--	--	--	2
Beryllium	ND	ND	ND	--	--	--	--	--	0.004
Boron	0.093J	0.072J	0.24	--	--	--	--	--	2
Cadmium	0.0023J	0.0028J	0.0039J	--	--	--	--	--	0.005
Chromium	ND	ND	ND	--	--	--	--	--	0.1
Cobalt	0.023	ND	0.012	--	--	--	--	--	1
Iron	0.086J	0.037J	0.97	--	--	--	--	--	5
Lead	0.0047J	ND	ND	--	--	--	--	--	0.0075
Manganese	1.8 L	0.69 L	0.57 L	--	--	--	--	--	0.15
Nickel	0.026	0.014	0.049	--	--	--	--	--	0.1
Selenium	ND	ND	ND	--	--	--	--	--	0.05
Thallium	ND ‡	ND ‡	ND ‡	--	--	--	--	--	0.002
Zinc	0.049	0.064	0.049	--	--	--	--	--	5
SPLP Metals (mg/L)									
Manganese	0.92 L	0.80 L	0.24 L	--	--	--	--	--	0.15

Notes:

-- Not Applicable (Compar
pH is less than 6.25 or g
† Concentration exceeds the most stringent MAC (or the only MAC for COCs with only one)
* Concentration exceeds the MAC for Chicago corporate limits
m Concentration exceeds the MAC for an MSA
r Concentration exceeds a TACO Tier 1 soil RO for residenital properties
c Concentration exceeds a TACO Tier 1 RO for the Construction Worker Exposure Route
L The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER
MAC Maximum Allowable Concentrtaions of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations

J Estimated Value
NA Analyte was not analyzed
ND Analyte was not detected above the method detection limit
‡ Detection limit was above reference concentrations
MSA Metropolitan Statistical Area
SCGIER Soil Component of the Groundwater Ingestion Exposure Route
Concentration exceeds applicable comparison criteria
Concentration exceeds the most stringent MAC, but is below the MAC for an MSA

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

January 04, 2018

Nick Szymanski
Environmental Design International
33 West Monroe
Suite 1825
Chicago, IL 60603

RE: Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Dear Nick Szymanski:
Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REVISED REPORT: SPLP Metals have been added.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

Pace Analytical Services, LLC
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Green Bay, WI 54302
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CERTIFICATIONS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40162435001	3019-01-B01 (0-7')	Solid	12/13/17 10:00	12/14/17 09:45
40162435002	3019-01-B01-D (0-7')	Solid	12/13/17 10:00	12/14/17 09:45
40162435003	3019-01-BO1 (7-14')	Solid	12/13/17 10:05	12/14/17 09:45
40162435004	3019-01-B02 (0-7')	Solid	12/13/17 09:20	12/14/17 09:45
40162435005	3019-01-B02 (7-14')	Solid	12/13/17 09:25	12/14/17 09:45
40162435006	3019-01-B03 (0-1')	Solid	12/13/17 09:35	12/14/17 09:45
40162435007	3019-01-B04 (0-1')	Solid	12/13/17 10:20	12/14/17 09:45
40162435008	3019-01-B05 (0-7')	Solid	12/13/17 12:30	12/14/17 09:45
40162435009	3019-01-B05 (7-14')	Solid	12/13/17 12:35	12/14/17 09:45
40162435010	3019-01-B06 (0-1')	Solid	12/13/17 12:05	12/14/17 09:45
40162435011	3019-01-B07 (0-1')	Solid	12/13/17 12:45	12/14/17 09:45
40162435012	3019-04-B01 (0-4)	Solid	12/13/17 11:25	12/14/17 09:45
40162435013	3019-04-B02 (0-4)	Solid	12/13/17 11:15	12/14/17 09:45
40162435014	3019-05-B01 (0-7)	Solid	12/13/17 11:40	12/14/17 09:45
40162435015	3019-05-B01-D (0-7)	Solid	12/13/17 11:40	12/14/17 09:45
40162435016	3019-05-B01 (7-10')	Solid	12/13/17 11:45	12/14/17 09:45
40162435017	3019-05-B02 (0-1)	Solid	12/13/17 11:55	12/14/17 09:45

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SAMPLE ANALYTE COUNT

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435014	3019-05-B01 (0-7)	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435015	3019-05-B01-D (0-7)	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435016	3019-05-B01 (7-10')	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	1	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	39	PASI-G
		ASTM D2974-87	KTS	1	PASI-G
		EPA 9040	ALY	1	PASI-G
40162435017	3019-05-B02 (0-1)	EPA 6010	JLD	22	PASI-G
		EPA 6010	JLD	2	PASI-G
		EPA 6010	JLD	15	PASI-G
		EPA 7470	AJT	1	PASI-G

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SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435013	**3019-04-B02 (0-4)**					
EPA 6010	Cadmium	0.0034J	mg/L	0.0050	12/20/17 13:18	
EPA 6010	Cobalt	0.047	mg/L	0.0050	12/20/17 13:18	
EPA 6010	Iron	0.076J	mg/L	0.10	12/20/17 13:18	
EPA 6010	Lead	0.013J	mg/L	0.013	12/20/17 13:18	2q
EPA 6010	Manganese	5.4	mg/L	0.0055	12/20/17 13:18	
EPA 6010	Nickel	0.042	mg/L	0.010	12/20/17 13:18	
EPA 6010	Zinc	0.097	mg/L	0.040	12/20/17 13:18	
EPA 7471	Mercury	0.041J	mg/kg	0.042	12/20/17 12:10	4q
EPA 8270	Anthracene	1.1J	mg/kg	1.1	12/20/17 16:23	
EPA 8270	Benzo(a)anthracene	5.5	mg/kg	1.1	12/20/17 16:23	
EPA 8270	Benzo(a)pyrene	7.0	mg/kg	1.1	12/20/17 16:23	
EPA 8270	Benzo(b)fluoranthene	9.6	mg/kg	1.2	12/20/17 16:23	
EPA 8270	Benzo(g,h,i)perylene	6.1	mg/kg	1.9	12/20/17 16:23	
EPA 8270	Benzo(k)fluoranthene	3.6	mg/kg	1.7	12/20/17 16:23	
EPA 8270	Carbazole	1.0J	mg/kg	1.1	12/20/17 16:23	
EPA 8270	Chrysene	7.2	mg/kg	1.1	12/20/17 16:23	
EPA 8270	Dibenz(a,h)anthracene	1.0J	mg/kg	1.9	12/20/17 16:23	
EPA 8270	Fluoranthene	16.1	mg/kg	1.0	12/20/17 16:23	
EPA 8270	Fluorene	0.28J	mg/kg	0.83	12/20/17 16:23	
EPA 8270	Indeno(1,2,3-cd)pyrene	6.0	mg/kg	1.5	12/20/17 16:23	
EPA 8270	Phenanthrene	6.1	mg/kg	0.91	12/20/17 16:23	
EPA 8270	Pyrene	13.3	mg/kg	1.6	12/20/17 16:23	
EPA 8260	Acetone	0.014J	mg/kg	0.031	12/18/17 15:33	
ASTM D2974-87	Percent Moisture	21.9	%	0.10	12/16/17 14:43	
EPA 9040	pH at 25 Degrees C	8.2	Std. Units	0.10	12/19/17 12:42	6q,H6
40162435014	**3019-05-B01 (0-7)**					
EPA 6010	Arsenic	12.4	mg/kg	5.8	12/19/17 12:18	
EPA 6010	Barium	68.4	mg/kg	0.58	12/19/17 12:18	
EPA 6010	Beryllium	0.81	mg/kg	0.46	12/19/17 12:18	
EPA 6010	Boron	19.6	mg/kg	4.6	12/19/17 12:18	
EPA 6010	Cadmium	0.33J	mg/kg	0.58	12/19/17 12:18	
EPA 6010	Calcium	18900	mg/kg	58.1	12/19/17 12:18	
EPA 6010	Chromium	22.5	mg/kg	1.2	12/19/17 12:18	
EPA 6010	Cobalt	9.6	mg/kg	0.58	12/19/17 12:18	
EPA 6010	Copper	30.0	mg/kg	2.9	12/19/17 12:18	
EPA 6010	Iron	24200	mg/kg	11.6	12/19/17 12:18	
EPA 6010	Lead	34.7	mg/kg	1.5	12/19/17 12:18	
EPA 6010	Magnesium	13400	mg/kg	116	12/19/17 12:18	
EPA 6010	Manganese	281	mg/kg	1.2	12/19/17 12:18	
EPA 6010	Nickel	27.3	mg/kg	1.2	12/19/17 12:18	
EPA 6010	Potassium	2550	mg/kg	116	12/19/17 12:18	
EPA 6010	Sodium	1110	mg/kg	58.1	12/19/17 12:18	
EPA 6010	Vanadium	30.6	mg/kg	1.2	12/19/17 12:18	
EPA 6010	Zinc	75.5	mg/kg	4.6	12/19/17 12:18	
EPA 6010	Manganese	0.92	mg/L	0.0055	01/03/18 12:48	
EPA 6010	Barium	0.46	mg/L	0.015	12/20/17 13:20	
EPA 6010	Boron	0.093J	mg/L	0.15	12/20/17 13:20	

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435014	**3019-05-B01 (0-7)**					
EPA 6010	Cadmium	0.0023J	mg/L	0.0050	12/20/17 13:20	
EPA 6010	Cobalt	0.023	mg/L	0.0050	12/20/17 13:20	
EPA 6010	Iron	0.086J	mg/L	0.10	12/20/17 13:20	
EPA 6010	Lead	0.0047J	mg/L	0.013	12/20/17 13:20	2q
EPA 6010	Manganese	1.8	mg/L	0.0055	12/20/17 13:20	
EPA 6010	Nickel	0.026	mg/L	0.010	12/20/17 13:20	
EPA 6010	Zinc	0.049	mg/L	0.040	12/20/17 13:20	
EPA 7471	Mercury	0.059	mg/kg	0.047	12/20/17 12:12	4q
EPA 8260	Acetone	0.097	mg/kg	0.032	12/18/17 15:55	
ASTM D2974-87	Percent Moisture	22.7	%	0.10	12/16/17 14:44	
EPA 9040	pH at 25 Degrees C	8.4	Std. Units	0.10	12/19/17 12:45	6q,H6
40162435015	**3019-05-B01-D (0-7)**					
EPA 6010	Arsenic	5.8J	mg/kg	5.9	12/19/17 12:21	
EPA 6010	Barium	99.5	mg/kg	0.59	12/19/17 12:21	
EPA 6010	Beryllium	0.98	mg/kg	0.48	12/19/17 12:21	
EPA 6010	Boron	12.5	mg/kg	4.8	12/19/17 12:21	
EPA 6010	Cadmium	0.48J	mg/kg	0.59	12/19/17 12:21	
EPA 6010	Calcium	4600	mg/kg	59.4	12/19/17 12:21	
EPA 6010	Chromium	24.8	mg/kg	1.2	12/19/17 12:21	
EPA 6010	Cobalt	8.8	mg/kg	0.59	12/19/17 12:21	
EPA 6010	Copper	36.3	mg/kg	3.0	12/19/17 12:21	
EPA 6010	Iron	20800	mg/kg	11.9	12/19/17 12:21	
EPA 6010	Lead	21.6	mg/kg	1.5	12/19/17 12:21	
EPA 6010	Magnesium	4820	mg/kg	119	12/19/17 12:21	
EPA 6010	Manganese	176	mg/kg	1.2	12/19/17 12:21	
EPA 6010	Nickel	29.5	mg/kg	1.2	12/19/17 12:21	
EPA 6010	Potassium	2800	mg/kg	119	12/19/17 12:21	
EPA 6010	Sodium	1370	mg/kg	59.4	12/19/17 12:21	
EPA 6010	Vanadium	33.6	mg/kg	1.2	12/19/17 12:21	
EPA 6010	Zinc	75.5	mg/kg	4.8	12/19/17 12:21	
EPA 6010	Manganese	0.80	mg/L	0.0055	01/03/18 12:50	
EPA 6010	Barium	0.30	mg/L	0.015	12/20/17 13:23	
EPA 6010	Boron	0.072J	mg/L	0.15	12/20/17 13:23	
EPA 6010	Cadmium	0.0028J	mg/L	0.0050	12/20/17 13:23	
EPA 6010	Iron	0.037J	mg/L	0.10	12/20/17 13:23	
EPA 6010	Manganese	0.69	mg/L	0.0055	12/20/17 13:23	
EPA 6010	Nickel	0.014	mg/L	0.010	12/20/17 13:23	
EPA 6010	Zinc	0.064	mg/L	0.040	12/20/17 13:23	
EPA 7471	Mercury	0.052	mg/kg	0.046	12/20/17 12:14	5q
EPA 8260	Acetone	0.13	mg/kg	0.038	12/18/17 16:18	
ASTM D2974-87	Percent Moisture	21.6	%	0.10	12/16/17 14:44	
EPA 9040	pH at 25 Degrees C	8.3	Std. Units	0.10	12/19/17 12:46	6q,H6
40162435016	**3019-05-B01 (7-10')**					
EPA 6010	Arsenic	6.7J	mg/kg	7.6	12/19/17 12:23	
EPA 6010	Barium	97.3	mg/kg	0.76	12/19/17 12:23	
EPA 6010	Beryllium	0.79	mg/kg	0.60	12/19/17 12:23	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

SUMMARY OF DETECTION

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40162435016	**3019-05-B01 (7-10')**					
EPA 6010	Boron	9.0	mg/kg	6.0	12/19/17 12:23	
EPA 6010	Cadmium	0.43J	mg/kg	0.76	12/19/17 12:23	
EPA 6010	Calcium	5210	mg/kg	75.6	12/19/17 12:23	
EPA 6010	Chromium	28.5	mg/kg	1.5	12/19/17 12:23	
EPA 6010	Cobalt	11.2	mg/kg	0.76	12/19/17 12:23	
EPA 6010	Copper	47.5	mg/kg	3.8	12/19/17 12:23	
EPA 6010	Iron	27200	mg/kg	15.1	12/19/17 12:23	
EPA 6010	Lead	16.7	mg/kg	2.0	12/19/17 12:23	
EPA 6010	Magnesium	4780	mg/kg	151	12/19/17 12:23	
EPA 6010	Manganese	120	mg/kg	1.5	12/19/17 12:23	
EPA 6010	Nickel	37.0	mg/kg	1.5	12/19/17 12:23	
EPA 6010	Potassium	2100	mg/kg	151	12/19/17 12:23	
EPA 6010	Selenium	3.2J	mg/kg	7.6	12/19/17 12:23	
EPA 6010	Sodium	932	mg/kg	75.6	12/19/17 12:23	
EPA 6010	Vanadium	54.5	mg/kg	1.5	12/19/17 12:23	
EPA 6010	Zinc	93.4	mg/kg	6.0	12/19/17 12:23	
EPA 6010	Manganese	0.24	mg/L	0.0055	01/03/18 12:52	
EPA 6010	Barium	0.32	mg/L	0.015	12/20/17 13:30	
EPA 6010	Boron	0.24	mg/L	0.15	12/20/17 13:30	
EPA 6010	Cadmium	0.0039J	mg/L	0.0050	12/20/17 13:30	
EPA 6010	Cobalt	0.012	mg/L	0.0050	12/20/17 13:30	
EPA 6010	Iron	0.97	mg/L	0.10	12/20/17 13:30	
EPA 6010	Manganese	0.57	mg/L	0.0055	12/20/17 13:30	
EPA 6010	Nickel	0.049	mg/L	0.010	12/20/17 13:30	
EPA 6010	Zinc	0.049	mg/L	0.040	12/20/17 13:30	
EPA 7471	Mercury	0.045J	mg/kg	0.051	12/20/17 13:52	4q
EPA 8260	Acetone	0.13	mg/kg	0.048	12/19/17 11:23	
ASTM D2974-87	Percent Moisture	35.3	%	0.10	12/16/17 14:44	
EPA 9040	pH at 25 Degrees C	6.9	Std. Units	0.10	12/19/17 12:51	6q,H6
40162435017	**3019-05-B02 (0-1)**					
EPA 6010	Arsenic	11.2	mg/kg	5.5	12/19/17 12:25	
EPA 6010	Barium	48.5	mg/kg	0.55	12/19/17 12:25	
EPA 6010	Beryllium	0.66	mg/kg	0.44	12/19/17 12:25	
EPA 6010	Boron	23.3	mg/kg	4.4	12/19/17 12:25	
EPA 6010	Cadmium	0.94	mg/kg	0.55	12/19/17 12:25	
EPA 6010	Calcium	94200	mg/kg	552	12/19/17 15:18	
EPA 6010	Chromium	18.2	mg/kg	1.1	12/19/17 12:25	
EPA 6010	Cobalt	6.0	mg/kg	0.55	12/19/17 12:25	
EPA 6010	Copper	23.9	mg/kg	2.8	12/19/17 12:25	
EPA 6010	Iron	21000	mg/kg	11.0	12/19/17 12:25	
EPA 6010	Lead	152	mg/kg	1.4	12/19/17 12:25	
EPA 6010	Magnesium	53500	mg/kg	1100	12/19/17 15:18	
EPA 6010	Manganese	618	mg/kg	1.1	12/19/17 12:25	
EPA 6010	Nickel	18.2	mg/kg	1.1	12/19/17 12:25	
EPA 6010	Potassium	1750	mg/kg	110	12/19/17 12:25	
EPA 6010	Sodium	380	mg/kg	55.2	12/19/17 12:25	
EPA 6010	Vanadium	18.5	mg/kg	1.1	12/19/17 12:25	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (0-7) **Lab ID: 40162435014** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<0.93**	mg/kg	2.9	0.93	1	12/18/17 11:34	12/19/17 12:18	7440-36-0	
Arsenic	**12.4**	mg/kg	5.8	1.2	1	12/18/17 11:34	12/19/17 12:18	7440-38-2	
Barium	**68.4**	mg/kg	0.58	0.17	1	12/18/17 11:34	12/19/17 12:18	7440-39-3	
Beryllium	**0.81**	mg/kg	0.46	0.14	1	12/18/17 11:34	12/19/17 12:18	7440-41-7	
Boron	**19.6**	mg/kg	4.6	0.77	1	12/18/17 11:34	12/19/17 12:18	7440-42-8	
Cadmium	**0.33J**	mg/kg	0.58	0.15	1	12/18/17 11:34	12/19/17 12:18	7440-43-9	
Calcium	**18900**	mg/kg	58.1	11.3	1	12/18/17 11:34	12/19/17 12:18	7440-70-2	
Chromium	**22.5**	mg/kg	1.2	0.32	1	12/18/17 11:34	12/19/17 12:18	7440-47-3	
Cobalt	**9.6**	mg/kg	0.58	0.17	1	12/18/17 11:34	12/19/17 12:18	7440-48-4	
Copper	**30.0**	mg/kg	2.9	0.95	1	12/18/17 11:34	12/19/17 12:18	7440-50-8	
Iron	**24200**	mg/kg	11.6	1.8	1	12/18/17 11:34	12/19/17 12:18	7439-89-6	
Lead	**34.7**	mg/kg	1.5	0.50	1	12/18/17 11:34	12/19/17 12:18	7439-92-1	
Magnesium	**13400**	mg/kg	116	13.4	1	12/18/17 11:34	12/19/17 12:18	7439-95-4	
Manganese	**281**	mg/kg	1.2	0.30	1	12/18/17 11:34	12/19/17 12:18	7439-96-5	
Nickel	**27.3**	mg/kg	1.2	0.27	1	12/18/17 11:34	12/19/17 12:18	7440-02-0	
Potassium	**2550**	mg/kg	116	18.5	1	12/18/17 11:34	12/19/17 12:18	7440-09-7	
Selenium	**<1.3**	mg/kg	5.8	1.3	1	12/18/17 11:34	12/19/17 12:18	7782-49-2	
Silver	**<0.40**	mg/kg	1.2	0.40	1	12/18/17 11:34	12/19/17 12:18	7440-22-4	
Sodium	**1110**	mg/kg	58.1	12.1	1	12/18/17 11:34	12/19/17 12:18	7440-23-5	
Thallium	**<0.90**	mg/kg	4.6	0.90	1	12/18/17 11:34	12/19/17 12:18	7440-28-0	
Vanadium	**30.6**	mg/kg	1.2	0.26	1	12/18/17 11:34	12/19/17 12:18	7440-62-2	
Zinc	**75.5**	mg/kg	4.6	1.1	1	12/18/17 11:34	12/19/17 12:18	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Manganese	**0.92**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:48	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:20	7440-36-0	
Barium	**0.46**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:20	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:20	7440-41-7	
Boron	**0.093J**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:20	7440-42-8	
Cadmium	**0.0023J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:20	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:20	7440-47-3	
Cobalt	**0.023**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:20	7440-48-4	
Iron	**0.086J**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:20	7439-89-6	
Lead	**0.0047J**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:20	7439-92-1	2q
Manganese	**1.8**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:20	7439-96-5	
Nickel	**0.026**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:20	7440-02-0	
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:20	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:20	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:20	7440-28-0	1q,3q
Zinc	**0.049**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:20	7440-66-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (0-7) **Lab ID: 40162435014** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 10:13	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.059**	mg/kg	0.047	0.014	1	12/20/17 06:44	12/20/17 12:12	7439-97-6	4q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.077**	mg/kg	0.26	0.077	1	12/19/17 10:37	12/20/17 16:02	83-32-9	
Acenaphthylene	**<0.077**	mg/kg	0.26	0.077	1	12/19/17 10:37	12/20/17 16:02	208-96-8	
Anthracene	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 16:02	120-12-7	
Benzo(a)anthracene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 16:02	56-55-3	
Benzo(a)pyrene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 16:02	50-32-8	
Benzo(b)fluoranthene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 16:02	205-99-2	
Benzo(g,h,i)perylene	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 16:02	191-24-2	
Benzo(k)fluoranthene	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/20/17 16:02	207-08-9	
4-Bromophenylphenyl ether	**<0.045**	mg/kg	0.15	0.045	1	12/19/17 10:37	12/20/17 16:02	101-55-3	
Butylbenzylphthalate	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 16:02	85-68-7	
Carbazole	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 16:02	86-74-8	
4-Chloro-3-methylphenol	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/20/17 16:02	59-50-7	
4-Chloroaniline	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 16:02	106-47-8	
bis(2-Chloroethoxy)methane	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/20/17 16:02	111-91-1	
bis(2-Chloroethyl) ether	**<0.068**	mg/kg	0.23	0.068	1	12/19/17 10:37	12/20/17 16:02	111-44-4	
2-Chloronaphthalene	**<0.028**	mg/kg	0.093	0.028	1	12/19/17 10:37	12/20/17 16:02	91-58-7	
2-Chlorophenol	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/20/17 16:02	95-57-8	
4-Chlorophenylphenyl ether	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 16:02	7005-72-3	
Chrysene	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 16:02	218-01-9	
Dibenz(a,h)anthracene	**<0.059**	mg/kg	0.20	0.059	1	12/19/17 10:37	12/20/17 16:02	53-70-3	
Dibenzofuran	**<0.026**	mg/kg	0.087	0.026	1	12/19/17 10:37	12/20/17 16:02	132-64-9	
1,2-Dichlorobenzene	**<0.068**	mg/kg	0.23	0.068	1	12/19/17 10:37	12/20/17 16:02	95-50-1	
1,3-Dichlorobenzene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 16:02	541-73-1	
1,4-Dichlorobenzene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 16:02	106-46-7	
3,3'-Dichlorobenzidine	**<0.059**	mg/kg	0.20	0.059	1	12/19/17 10:37	12/20/17 16:02	91-94-1	
2,4-Dichlorophenol	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/20/17 16:02	120-83-2	
Diethylphthalate	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 16:02	84-66-2	
2,4-Dimethylphenol	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 16:02	105-67-9	
Dimethylphthalate	**<0.028**	mg/kg	0.094	0.028	1	12/19/17 10:37	12/20/17 16:02	131-11-3	
Di-n-butylphthalate	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 16:02	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/20/17 16:02	534-52-1	
2,4-Dinitrophenol	**<0.066**	mg/kg	0.22	0.066	1	12/19/17 10:37	12/20/17 16:02	51-28-5	
2,4-Dinitrotoluene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 16:02	121-14-2	
2,6-Dinitrotoluene	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/20/17 16:02	606-20-2	
Di-n-octylphthalate	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/20/17 16:02	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 16:02	117-81-7	
Fluoranthene	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/20/17 16:02	206-44-0	
Fluorene	**<0.025**	mg/kg	0.084	0.025	1	12/19/17 10:37	12/20/17 16:02	86-73-7	

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ANALYTICAL RESULTS

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Pace Project No.: 40162435

Sample: 3019-05-B01 (0-7) **Lab ID: 40162435014** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.055**	mg/kg	0.18	0.055	1	12/19/17 10:37	12/20/17 16:02	87-68-3	
Hexachlorobenzene	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 16:02	118-74-1	
Hexachlorocyclopentadiene	**<0.051**	mg/kg	0.17	0.051	1	12/19/17 10:37	12/20/17 16:02	77-47-4	
Hexachloroethane	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 16:02	67-72-1	
Indeno(1,2,3-cd)pyrene	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/20/17 16:02	193-39-5	
Isophorone	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 16:02	78-59-1	
2-Methylnaphthalene	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 16:02	91-57-6	
2-Methylphenol(o-Cresol)	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/20/17 16:02	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 16:02		
Naphthalene	**<0.076**	mg/kg	0.25	0.076	1	12/19/17 10:37	12/20/17 16:02	91-20-3	
2-Nitroaniline	**<0.062**	mg/kg	0.21	0.062	1	12/19/17 10:37	12/20/17 16:02	88-74-4	
3-Nitroaniline	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 16:02	99-09-2	
4-Nitroaniline	**<0.090**	mg/kg	0.30	0.090	1	12/19/17 10:37	12/20/17 16:02	100-01-6	
Nitrobenzene	**<0.044**	mg/kg	0.15	0.044	1	12/19/17 10:37	12/20/17 16:02	98-95-3	
2-Nitrophenol	**<0.068**	mg/kg	0.23	0.068	1	12/19/17 10:37	12/20/17 16:02	88-75-5	
4-Nitrophenol	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/20/17 16:02	100-02-7	
N-Nitroso-di-n-propylamine	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 16:02	621-64-7	
N-Nitrosodiphenylamine	**<0.29**	mg/kg	0.98	0.29	1	12/19/17 10:37	12/20/17 16:02	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 16:02	108-60-1	
Pentachlorophenol	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 16:02	87-86-5	
Phenanthrene	**<0.028**	mg/kg	0.092	0.028	1	12/19/17 10:37	12/20/17 16:02	85-01-8	
Phenol	**<0.051**	mg/kg	0.17	0.051	1	12/19/17 10:37	12/20/17 16:02	108-95-2	
Pyrene	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 16:02	129-00-0	
1,2,4-Trichlorobenzene	**<0.024**	mg/kg	0.081	0.024	1	12/19/17 10:37	12/20/17 16:02	120-82-1	
2,4,5-Trichlorophenol	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/20/17 16:02	95-95-4	
2,4,6-Trichlorophenol	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 16:02	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	52	%	13-114		1	12/19/17 10:37	12/20/17 16:02	4165-60-0	
2-Fluorobiphenyl (S)	62	%	18-127		1	12/19/17 10:37	12/20/17 16:02	321-60-8	
Terphenyl-d14 (S)	76	%	41-109		1	12/19/17 10:37	12/20/17 16:02	1718-51-0	
Phenol-d6 (S)	62	%	30-97		1	12/19/17 10:37	12/20/17 16:02	13127-88-3	
2-Fluorophenol (S)	54	%	16-103		1	12/19/17 10:37	12/20/17 16:02	367-12-4	
2,4,6-Tribromophenol (S)	71	%	13-143		1	12/19/17 10:37	12/20/17 16:02	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.097**	mg/kg	0.032	0.0096	1	12/18/17 05:00	12/18/17 15:55	67-64-1	
Benzene	**<0.0048**	mg/kg	0.016	0.0048	1	12/18/17 05:00	12/18/17 15:55	71-43-2	
Bromodichloromethane	**<0.0034**	mg/kg	0.011	0.0034	1	12/18/17 05:00	12/18/17 15:55	75-27-4	
Bromoform	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 15:55	75-25-2	
Bromomethane	**<0.0077**	mg/kg	0.026	0.0077	1	12/18/17 05:00	12/18/17 15:55	74-83-9	
2-Butanone (MEK)	**<0.0047**	mg/kg	0.016	0.0047	1	12/18/17 05:00	12/18/17 15:55	78-93-3	
Carbon disulfide	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 15:55	75-15-0	
Carbon tetrachloride	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/18/17 15:55	56-23-5	
Chlorobenzene	**<0.0037**	mg/kg	0.012	0.0037	1	12/18/17 05:00	12/18/17 15:55	108-90-7	
Chloroethane	**<0.0044**	mg/kg	0.015	0.0044	1	12/18/17 05:00	12/18/17 15:55	75-00-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (0-7) **Lab ID: 40162435014** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/18/17 15:55	67-66-3	
Chloromethane	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 15:55	74-87-3	
Dibromochloromethane	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 15:55	124-48-1	
1,1-Dichloroethane	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 15:55	75-34-3	
1,2-Dichloroethane	**<0.0052**	mg/kg	0.017	0.0052	1	12/18/17 05:00	12/18/17 15:55	107-06-2	
1,1-Dichloroethene	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/18/17 15:55	75-35-4	
cis-1,2-Dichloroethene	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/18/17 15:55	156-59-2	
trans-1,2-Dichloroethene	**<0.0054**	mg/kg	0.018	0.0054	1	12/18/17 05:00	12/18/17 15:55	156-60-5	L1
1,2-Dichloropropane	**<0.0032**	mg/kg	0.011	0.0032	1	12/18/17 05:00	12/18/17 15:55	78-87-5	
cis-1,3-Dichloropropene	**<0.0025**	mg/kg	0.0085	0.0025	1	12/18/17 05:00	12/18/17 15:55	10061-01-5	
trans-1,3-Dichloropropene	**<0.0024**	mg/kg	0.0081	0.0024	1	12/18/17 05:00	12/18/17 15:55	10061-02-6	
Ethylbenzene	**<0.0038**	mg/kg	0.013	0.0038	1	12/18/17 05:00	12/18/17 15:55	100-41-4	
2-Hexanone	**<0.0030**	mg/kg	0.010	0.0030	1	12/18/17 05:00	12/18/17 15:55	591-78-6	
Methylene Chloride	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 15:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0033**	mg/kg	0.011	0.0033	1	12/18/17 05:00	12/18/17 15:55	108-10-1	
Methyl-tert-butyl ether	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/18/17 15:55	1634-04-4	
Styrene	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 15:55	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 15:55	79-34-5	
Tetrachloroethene	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/18/17 15:55	127-18-4	
Toluene	**<0.0036**	mg/kg	0.012	0.0036	1	12/18/17 05:00	12/18/17 15:55	108-88-3	
1,1,1-Trichloroethane	**<0.0055**	mg/kg	0.018	0.0055	1	12/18/17 05:00	12/18/17 15:55	71-55-6	
1,1,2-Trichloroethane	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 15:55	79-00-5	
Trichloroethene	**<0.0035**	mg/kg	0.012	0.0035	1	12/18/17 05:00	12/18/17 15:55	79-01-6	
Vinyl acetate	**<0.0041**	mg/kg	0.014	0.0041	1	12/18/17 05:00	12/18/17 15:55	108-05-4	
Vinyl chloride	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 15:55	75-01-4	
Xylene (Total)	**<0.012**	mg/kg	0.040	0.012	1	12/18/17 05:00	12/18/17 15:55	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	112	%	70-130		1	12/18/17 05:00	12/18/17 15:55	1868-53-7	
Toluene-d8 (S)	106	%	70-130		1	12/18/17 05:00	12/18/17 15:55	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		1	12/18/17 05:00	12/18/17 15:55	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.7**	%	0.10	0.10	1		12/16/17 14:44		
9040 pH	Analytical Method: EPA 9040								
pH at 25 Degrees C	**8.4**	Std. Units	0.10	0.010	1		12/19/17 12:45		6q,H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01-D (0-7) **Lab ID: 40162435015** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<0.95**	mg/kg	3.0	0.95	1	12/18/17 11:34	12/19/17 12:21	7440-36-0	
Arsenic	**5.8J**	mg/kg	5.9	1.2	1	12/18/17 11:34	12/19/17 12:21	7440-38-2	
Barium	**99.5**	mg/kg	0.59	0.18	1	12/18/17 11:34	12/19/17 12:21	7440-39-3	
Beryllium	**0.98**	mg/kg	0.48	0.14	1	12/18/17 11:34	12/19/17 12:21	7440-41-7	
Boron	**12.5**	mg/kg	4.8	0.79	1	12/18/17 11:34	12/19/17 12:21	7440-42-8	
Cadmium	**0.48J**	mg/kg	0.59	0.16	1	12/18/17 11:34	12/19/17 12:21	7440-43-9	
Calcium	**4600**	mg/kg	59.4	11.6	1	12/18/17 11:34	12/19/17 12:21	7440-70-2	
Chromium	**24.8**	mg/kg	1.2	0.33	1	12/18/17 11:34	12/19/17 12:21	7440-47-3	
Cobalt	**8.8**	mg/kg	0.59	0.17	1	12/18/17 11:34	12/19/17 12:21	7440-48-4	
Copper	**36.3**	mg/kg	3.0	0.97	1	12/18/17 11:34	12/19/17 12:21	7440-50-8	
Iron	**20800**	mg/kg	11.9	1.8	1	12/18/17 11:34	12/19/17 12:21	7439-89-6	
Lead	**21.6**	mg/kg	1.5	0.51	1	12/18/17 11:34	12/19/17 12:21	7439-92-1	
Magnesium	**4820**	mg/kg	119	13.7	1	12/18/17 11:34	12/19/17 12:21	7439-95-4	
Manganese	**176**	mg/kg	1.2	0.30	1	12/18/17 11:34	12/19/17 12:21	7439-96-5	
Nickel	**29.5**	mg/kg	1.2	0.27	1	12/18/17 11:34	12/19/17 12:21	7440-02-0	
Potassium	**2800**	mg/kg	119	18.9	1	12/18/17 11:34	12/19/17 12:21	7440-09-7	
Selenium	**<1.3**	mg/kg	5.9	1.3	1	12/18/17 11:34	12/19/17 12:21	7782-49-2	
Silver	**<0.41**	mg/kg	1.2	0.41	1	12/18/17 11:34	12/19/17 12:21	7440-22-4	
Sodium	**1370**	mg/kg	59.4	12.4	1	12/18/17 11:34	12/19/17 12:21	7440-23-5	
Thallium	**<0.92**	mg/kg	4.8	0.92	1	12/18/17 11:34	12/19/17 12:21	7440-28-0	
Vanadium	**33.6**	mg/kg	1.2	0.26	1	12/18/17 11:34	12/19/17 12:21	7440-62-2	
Zinc	**75.5**	mg/kg	4.8	1.1	1	12/18/17 11:34	12/19/17 12:21	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Manganese	**0.80**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:50	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:23	7440-36-0	
Barium	**0.30**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:23	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:23	7440-41-7	
Boron	**0.072J**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:23	7440-42-8	
Cadmium	**0.0028J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:23	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:23	7440-47-3	
Cobalt	**<0.0014**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:23	7440-48-4	
Iron	**0.037J**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:23	7439-89-6	
Lead	**<0.0043**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:23	7439-92-1	
Manganese	**0.69**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:23	7439-96-5	
Nickel	**0.014**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:23	7440-02-0	
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:23	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:23	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:23	7440-28-0	1q,3q
Zinc	**0.064**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:23	7440-66-6	

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01-D (0-7) **Lab ID: 40162435015** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 10:16	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.052**	mg/kg	0.046	0.014	1	12/20/17 06:44	12/20/17 12:14	7439-97-6	5q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.075**	mg/kg	0.25	0.075	1	12/19/17 10:37	12/20/17 14:36	83-32-9	
Acenaphthylene	**<0.076**	mg/kg	0.25	0.076	1	12/19/17 10:37	12/20/17 14:36	208-96-8	
Anthracene	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 14:36	120-12-7	
Benzo(a)anthracene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 14:36	56-55-3	
Benzo(a)pyrene	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 14:36	50-32-8	
Benzo(b)fluoranthene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/20/17 14:36	205-99-2	
Benzo(g,h,i)perylene	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/20/17 14:36	191-24-2	
Benzo(k)fluoranthene	**<0.051**	mg/kg	0.17	0.051	1	12/19/17 10:37	12/20/17 14:36	207-08-9	
4-Bromophenylphenyl ether	**<0.045**	mg/kg	0.15	0.045	1	12/19/17 10:37	12/20/17 14:36	101-55-3	
Butylbenzylphthalate	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 14:36	85-68-7	
Carbazole	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 14:36	86-74-8	
4-Chloro-3-methylphenol	**<0.066**	mg/kg	0.22	0.066	1	12/19/17 10:37	12/20/17 14:36	59-50-7	
4-Chloroaniline	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 14:36	106-47-8	
bis(2-Chloroethoxy)methane	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 14:36	111-91-1	
bis(2-Chloroethyl) ether	**<0.066**	mg/kg	0.22	0.066	1	12/19/17 10:37	12/20/17 14:36	111-44-4	
2-Chloronaphthalene	**<0.027**	mg/kg	0.091	0.027	1	12/19/17 10:37	12/20/17 14:36	91-58-7	
2-Chlorophenol	**<0.053**	mg/kg	0.18	0.053	1	12/19/17 10:37	12/20/17 14:36	95-57-8	
4-Chlorophenylphenyl ether	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 14:36	7005-72-3	
Chrysene	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 14:36	218-01-9	
Dibenz(a,h)anthracene	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/20/17 14:36	53-70-3	
Dibenzofuran	**<0.026**	mg/kg	0.086	0.026	1	12/19/17 10:37	12/20/17 14:36	132-64-9	
1,2-Dichlorobenzene	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/20/17 14:36	95-50-1	
1,3-Dichlorobenzene	**<0.029**	mg/kg	0.098	0.029	1	12/19/17 10:37	12/20/17 14:36	541-73-1	
1,4-Dichlorobenzene	**<0.030**	mg/kg	0.099	0.030	1	12/19/17 10:37	12/20/17 14:36	106-46-7	
3,3'-Dichlorobenzidine	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/20/17 14:36	91-94-1	
2,4-Dichlorophenol	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/20/17 14:36	120-83-2	
Diethylphthalate	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 14:36	84-66-2	
2,4-Dimethylphenol	**<0.042**	mg/kg	0.14	0.042	1	12/19/17 10:37	12/20/17 14:36	105-67-9	
Dimethylphthalate	**<0.028**	mg/kg	0.092	0.028	1	12/19/17 10:37	12/20/17 14:36	131-11-3	
Di-n-butylphthalate	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 14:36	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.066**	mg/kg	0.22	0.066	1	12/19/17 10:37	12/20/17 14:36	534-52-1	
2,4-Dinitrophenol	**<0.065**	mg/kg	0.22	0.065	1	12/19/17 10:37	12/20/17 14:36	51-28-5	
2,4-Dinitrotoluene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 14:36	121-14-2	
2,6-Dinitrotoluene	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/20/17 14:36	606-20-2	
Di-n-octylphthalate	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/20/17 14:36	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.035**	mg/kg	0.12	0.035	1	12/19/17 10:37	12/20/17 14:36	117-81-7	
Fluoranthene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/20/17 14:36	206-44-0	
Fluorene	**<0.025**	mg/kg	0.083	0.025	1	12/19/17 10:37	12/20/17 14:36	86-73-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01-D (0-7) **Lab ID: 40162435015** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/20/17 14:36	87-68-3	
Hexachlorobenzene	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 14:36	118-74-1	
Hexachlorocyclopentadiene	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/20/17 14:36	77-47-4	
Hexachloroethane	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 14:36	67-72-1	
Indeno(1,2,3-cd)pyrene	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/20/17 14:36	193-39-5	
Isophorone	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/20/17 14:36	78-59-1	
2-Methylnaphthalene	**<0.055**	mg/kg	0.18	0.055	1	12/19/17 10:37	12/20/17 14:36	91-57-6	
2-Methylphenol(o-Cresol)	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/20/17 14:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/20/17 14:36		
Naphthalene	**<0.074**	mg/kg	0.25	0.074	1	12/19/17 10:37	12/20/17 14:36	91-20-3	
2-Nitroaniline	**<0.061**	mg/kg	0.20	0.061	1	12/19/17 10:37	12/20/17 14:36	88-74-4	
3-Nitroaniline	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/20/17 14:36	99-09-2	
4-Nitroaniline	**<0.088**	mg/kg	0.29	0.088	1	12/19/17 10:37	12/20/17 14:36	100-01-6	
Nitrobenzene	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/20/17 14:36	98-95-3	
2-Nitrophenol	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/20/17 14:36	88-75-5	
4-Nitrophenol	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/20/17 14:36	100-02-7	
N-Nitroso-di-n-propylamine	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/20/17 14:36	621-64-7	
N-Nitrosodiphenylamine	**<0.29**	mg/kg	0.96	0.29	1	12/19/17 10:37	12/20/17 14:36	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.055**	mg/kg	0.18	0.055	1	12/19/17 10:37	12/20/17 14:36	108-60-1	
Pentachlorophenol	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/20/17 14:36	87-86-5	
Phenanthrene	**<0.027**	mg/kg	0.091	0.027	1	12/19/17 10:37	12/20/17 14:36	85-01-8	
Phenol	**<0.050**	mg/kg	0.17	0.050	1	12/19/17 10:37	12/20/17 14:36	108-95-2	
Pyrene	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/20/17 14:36	129-00-0	
1,2,4-Trichlorobenzene	**<0.024**	mg/kg	0.080	0.024	1	12/19/17 10:37	12/20/17 14:36	120-82-1	
2,4,5-Trichlorophenol	**<0.038**	mg/kg	0.13	0.038	1	12/19/17 10:37	12/20/17 14:36	95-95-4	
2,4,6-Trichlorophenol	**<0.032**	mg/kg	0.11	0.032	1	12/19/17 10:37	12/20/17 14:36	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	45	%	13-114		1	12/19/17 10:37	12/20/17 14:36	4165-60-0	
2-Fluorobiphenyl (S)	52	%	18-127		1	12/19/17 10:37	12/20/17 14:36	321-60-8	
Terphenyl-d14 (S)	73	%	41-109		1	12/19/17 10:37	12/20/17 14:36	1718-51-0	
Phenol-d6 (S)	54	%	30-97		1	12/19/17 10:37	12/20/17 14:36	13127-88-3	
2-Fluorophenol (S)	50	%	16-103		1	12/19/17 10:37	12/20/17 14:36	367-12-4	
2,4,6-Tribromophenol (S)	57	%	13-143		1	12/19/17 10:37	12/20/17 14:36	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.13**	mg/kg	0.038	0.011	1	12/18/17 05:00	12/18/17 16:18	67-64-1	
Benzene	**<0.0056**	mg/kg	0.019	0.0056	1	12/18/17 05:00	12/18/17 16:18	71-43-2	
Bromodichloromethane	**<0.0040**	mg/kg	0.013	0.0040	1	12/18/17 05:00	12/18/17 16:18	75-27-4	
Bromoform	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/18/17 16:18	75-25-2	
Bromomethane	**<0.0091**	mg/kg	0.030	0.0091	1	12/18/17 05:00	12/18/17 16:18	74-83-9	
2-Butanone (MEK)	**<0.0056**	mg/kg	0.019	0.0056	1	12/18/17 05:00	12/18/17 16:18	78-93-3	
Carbon disulfide	**<0.0057**	mg/kg	0.019	0.0057	1	12/18/17 05:00	12/18/17 16:18	75-15-0	
Carbon tetrachloride	**<0.0060**	mg/kg	0.020	0.0060	1	12/18/17 05:00	12/18/17 16:18	56-23-5	
Chlorobenzene	**<0.0043**	mg/kg	0.014	0.0043	1	12/18/17 05:00	12/18/17 16:18	108-90-7	
Chloroethane	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/18/17 16:18	75-00-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01-D (0-7) **Lab ID: 40162435015** Collected: 12/13/17 11:40 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0063**	mg/kg	0.021	0.0063	1	12/18/17 05:00	12/18/17 16:18	67-66-3	
Chloromethane	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/18/17 16:18	74-87-3	
Dibromochloromethane	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 16:18	124-48-1	
1,1-Dichloroethane	**<0.0055**	mg/kg	0.018	0.0055	1	12/18/17 05:00	12/18/17 16:18	75-34-3	
1,2-Dichloroethane	**<0.0062**	mg/kg	0.021	0.0062	1	12/18/17 05:00	12/18/17 16:18	107-06-2	
1,1-Dichloroethene	**<0.0062**	mg/kg	0.021	0.0062	1	12/18/17 05:00	12/18/17 16:18	75-35-4	
cis-1,2-Dichloroethene	**<0.0063**	mg/kg	0.021	0.0063	1	12/18/17 05:00	12/18/17 16:18	156-59-2	
trans-1,2-Dichloroethene	**<0.0063**	mg/kg	0.021	0.0063	1	12/18/17 05:00	12/18/17 16:18	156-60-5	L1
1,2-Dichloropropane	**<0.0038**	mg/kg	0.013	0.0038	1	12/18/17 05:00	12/18/17 16:18	78-87-5	
cis-1,3-Dichloropropene	**<0.0030**	mg/kg	0.010	0.0030	1	12/18/17 05:00	12/18/17 16:18	10061-01-5	
trans-1,3-Dichloropropene	**<0.0029**	mg/kg	0.0095	0.0029	1	12/18/17 05:00	12/18/17 16:18	10061-02-6	
Ethylbenzene	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/18/17 16:18	100-41-4	
2-Hexanone	**<0.0036**	mg/kg	0.012	0.0036	1	12/18/17 05:00	12/18/17 16:18	591-78-6	
Methylene Chloride	**<0.0058**	mg/kg	0.019	0.0058	1	12/18/17 05:00	12/18/17 16:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0039**	mg/kg	0.013	0.0039	1	12/18/17 05:00	12/18/17 16:18	108-10-1	
Methyl-tert-butyl ether	**<0.0060**	mg/kg	0.020	0.0060	1	12/18/17 05:00	12/18/17 16:18	1634-04-4	
Styrene	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/18/17 16:18	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0041**	mg/kg	0.014	0.0041	1	12/18/17 05:00	12/18/17 16:18	79-34-5	
Tetrachloroethene	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/18/17 16:18	127-18-4	
Toluene	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 16:18	108-88-3	
1,1,1-Trichloroethane	**<0.0064**	mg/kg	0.021	0.0064	1	12/18/17 05:00	12/18/17 16:18	71-55-6	
1,1,2-Trichloroethane	**<0.0046**	mg/kg	0.015	0.0046	1	12/18/17 05:00	12/18/17 16:18	79-00-5	
Trichloroethene	**<0.0042**	mg/kg	0.014	0.0042	1	12/18/17 05:00	12/18/17 16:18	79-01-6	
Vinyl acetate	**<0.0048**	mg/kg	0.016	0.0048	1	12/18/17 05:00	12/18/17 16:18	108-05-4	
Vinyl chloride	**<0.0054**	mg/kg	0.018	0.0054	1	12/18/17 05:00	12/18/17 16:18	75-01-4	
Xylene (Total)	**<0.014**	mg/kg	0.048	0.014	1	12/18/17 05:00	12/18/17 16:18	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	116	%	70-130		1	12/18/17 05:00	12/18/17 16:18	1868-53-7	
Toluene-d8 (S)	111	%	70-130		1	12/18/17 05:00	12/18/17 16:18	2037-26-5	
4-Bromofluorobenzene (S)	87	%	70-130		1	12/18/17 05:00	12/18/17 16:18	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.6**	%	0.10	0.10	1		12/16/17 14:44		
9040 pH	Analytical Method: EPA 9040								
pH at 25 Degrees C	**8.3**	Std. Units	0.10	0.010	1		12/19/17 12:46		6q,H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (7-10') **Lab ID: 40162435016** Collected: 12/13/17 11:45 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<1.2**	mg/kg	3.8	1.2	1	12/18/17 11:34	12/19/17 12:23	7440-36-0	
Arsenic	**6.7J**	mg/kg	7.6	1.6	1	12/18/17 11:34	12/19/17 12:23	7440-38-2	
Barium	**97.3**	mg/kg	0.76	0.23	1	12/18/17 11:34	12/19/17 12:23	7440-39-3	
Beryllium	**0.79**	mg/kg	0.60	0.18	1	12/18/17 11:34	12/19/17 12:23	7440-41-7	
Boron	**9.0**	mg/kg	6.0	1.0	1	12/18/17 11:34	12/19/17 12:23	7440-42-8	
Cadmium	**0.43J**	mg/kg	0.76	0.20	1	12/18/17 11:34	12/19/17 12:23	7440-43-9	
Calcium	**5210**	mg/kg	75.6	14.8	1	12/18/17 11:34	12/19/17 12:23	7440-70-2	
Chromium	**28.5**	mg/kg	1.5	0.42	1	12/18/17 11:34	12/19/17 12:23	7440-47-3	
Cobalt	**11.2**	mg/kg	0.76	0.22	1	12/18/17 11:34	12/19/17 12:23	7440-48-4	
Copper	**47.5**	mg/kg	3.8	1.2	1	12/18/17 11:34	12/19/17 12:23	7440-50-8	
Iron	**27200**	mg/kg	15.1	2.3	1	12/18/17 11:34	12/19/17 12:23	7439-89-6	
Lead	**16.7**	mg/kg	2.0	0.65	1	12/18/17 11:34	12/19/17 12:23	7439-92-1	
Magnesium	**4780**	mg/kg	151	17.4	1	12/18/17 11:34	12/19/17 12:23	7439-95-4	
Manganese	**120**	mg/kg	1.5	0.39	1	12/18/17 11:34	12/19/17 12:23	7439-96-5	
Nickel	**37.0**	mg/kg	1.5	0.35	1	12/18/17 11:34	12/19/17 12:23	7440-02-0	
Potassium	**2100**	mg/kg	151	24.0	1	12/18/17 11:34	12/19/17 12:23	7440-09-7	
Selenium	**3.2J**	mg/kg	7.6	1.7	1	12/18/17 11:34	12/19/17 12:23	7782-49-2	
Silver	**<0.52**	mg/kg	1.5	0.52	1	12/18/17 11:34	12/19/17 12:23	7440-22-4	
Sodium	**932**	mg/kg	75.6	15.7	1	12/18/17 11:34	12/19/17 12:23	7440-23-5	
Thallium	**<1.2**	mg/kg	6.0	1.2	1	12/18/17 11:34	12/19/17 12:23	7440-28-0	
Vanadium	**54.5**	mg/kg	1.5	0.34	1	12/18/17 11:34	12/19/17 12:23	7440-62-2	
Zinc	**93.4**	mg/kg	6.0	1.4	1	12/18/17 11:34	12/19/17 12:23	7440-66-6	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 12/28/17 13:28								
Manganese	**0.24**	mg/L	0.0055	0.0018	1	01/02/18 14:01	01/03/18 12:52	7439-96-5	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Antimony	**<0.0076**	mg/L	0.025	0.0076	1	12/19/17 16:37	12/20/17 13:30	7440-36-0	
Barium	**0.32**	mg/L	0.015	0.0050	1	12/19/17 16:37	12/20/17 13:30	7440-39-3	
Beryllium	**<0.0012**	mg/L	0.0040	0.0012	1	12/19/17 16:37	12/20/17 13:30	7440-41-7	
Boron	**0.24**	mg/L	0.15	0.050	1	12/19/17 16:37	12/20/17 13:30	7440-42-8	
Cadmium	**0.0039J**	mg/L	0.0050	0.0013	1	12/19/17 16:37	12/20/17 13:30	7440-43-9	
Chromium	**<0.0025**	mg/L	0.010	0.0025	1	12/19/17 16:37	12/20/17 13:30	7440-47-3	
Cobalt	**0.012**	mg/L	0.0050	0.0014	1	12/19/17 16:37	12/20/17 13:30	7440-48-4	
Iron	**0.97**	mg/L	0.10	0.034	1	12/19/17 16:37	12/20/17 13:30	7439-89-6	
Lead	**<0.0043**	mg/L	0.013	0.0043	1	12/19/17 16:37	12/20/17 13:30	7439-92-1	
Manganese	**0.57**	mg/L	0.0055	0.0018	1	12/19/17 16:37	12/20/17 13:30	7439-96-5	
Nickel	**0.049**	mg/L	0.010	0.0026	1	12/19/17 16:37	12/20/17 13:30	7440-02-0	
Selenium	**<0.017**	mg/L	0.050	0.017	1	12/19/17 16:37	12/20/17 13:30	7782-49-2	
Silver	**<0.0033**	mg/L	0.010	0.0033	1	12/19/17 16:37	12/20/17 13:30	7440-22-4	
Thallium	**<0.0074**	mg/L	0.040	0.0074	1	12/19/17 16:37	12/20/17 13:30	7440-28-0	1q,3q
Zinc	**0.049**	mg/L	0.040	0.0093	1	12/19/17 16:37	12/20/17 13:30	7440-66-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (7-10') **Lab ID: 40162435016** Collected: 12/13/17 11:45 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/18/17 12:32								
Mercury	**<0.00013**	mg/L	0.00042	0.00013	1	12/19/17 14:55	12/20/17 10:18	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.045J**	mg/kg	0.051	0.015	1	12/20/17 06:44	12/20/17 13:52	7439-97-6	4q
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	**<0.092**	mg/kg	0.31	0.092	1	12/19/17 10:37	12/19/17 19:06	83-32-9	
Acenaphthylene	**<0.092**	mg/kg	0.31	0.092	1	12/19/17 10:37	12/19/17 19:06	208-96-8	
Anthracene	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/19/17 19:06	120-12-7	
Benzo(a)anthracene	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/19/17 19:06	56-55-3	
Benzo(a)pyrene	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/19/17 19:06	50-32-8	
Benzo(b)fluoranthene	**<0.044**	mg/kg	0.15	0.044	1	12/19/17 10:37	12/19/17 19:06	205-99-2	
Benzo(g,h,i)perylene	**<0.068**	mg/kg	0.23	0.068	1	12/19/17 10:37	12/19/17 19:06	191-24-2	
Benzo(k)fluoranthene	**<0.062**	mg/kg	0.21	0.062	1	12/19/17 10:37	12/19/17 19:06	207-08-9	
4-Bromophenylphenyl ether	**<0.054**	mg/kg	0.18	0.054	1	12/19/17 10:37	12/19/17 19:06	101-55-3	
Butylbenzylphthalate	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/19/17 19:06	85-68-7	
Carbazole	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/19/17 19:06	86-74-8	
4-Chloro-3-methylphenol	**<0.080**	mg/kg	0.27	0.080	1	12/19/17 10:37	12/19/17 19:06	59-50-7	
4-Chloroaniline	**<0.042**	mg/kg	0.14	0.042	1	12/19/17 10:37	12/19/17 19:06	106-47-8	
bis(2-Chloroethoxy)methane	**<0.070**	mg/kg	0.23	0.070	1	12/19/17 10:37	12/19/17 19:06	111-91-1	
bis(2-Chloroethyl) ether	**<0.081**	mg/kg	0.27	0.081	1	12/19/17 10:37	12/19/17 19:06	111-44-4	
2-Chloronaphthalene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/19/17 19:06	91-58-7	
2-Chlorophenol	**<0.064**	mg/kg	0.21	0.064	1	12/19/17 10:37	12/19/17 19:06	95-57-8	
4-Chlorophenylphenyl ether	**<0.048**	mg/kg	0.16	0.048	1	12/19/17 10:37	12/19/17 19:06	7005-72-3	
Chrysene	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/19/17 19:06	218-01-9	
Dibenz(a,h)anthracene	**<0.070**	mg/kg	0.23	0.070	1	12/19/17 10:37	12/19/17 19:06	53-70-3	
Dibenzofuran	**<0.031**	mg/kg	0.10	0.031	1	12/19/17 10:37	12/19/17 19:06	132-64-9	
1,2-Dichlorobenzene	**<0.081**	mg/kg	0.27	0.081	1	12/19/17 10:37	12/19/17 19:06	95-50-1	
1,3-Dichlorobenzene	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/19/17 19:06	541-73-1	
1,4-Dichlorobenzene	**<0.036**	mg/kg	0.12	0.036	1	12/19/17 10:37	12/19/17 19:06	106-46-7	
3,3'-Dichlorobenzidine	**<0.070**	mg/kg	0.23	0.070	1	12/19/17 10:37	12/19/17 19:06	91-94-1	
2,4-Dichlorophenol	**<0.069**	mg/kg	0.23	0.069	1	12/19/17 10:37	12/19/17 19:06	120-83-2	
Diethylphthalate	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/19/17 19:06	84-66-2	
2,4-Dimethylphenol	**<0.051**	mg/kg	0.17	0.051	1	12/19/17 10:37	12/19/17 19:06	105-67-9	
Dimethylphthalate	**<0.034**	mg/kg	0.11	0.034	1	12/19/17 10:37	12/19/17 19:06	131-11-3	
Di-n-butylphthalate	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/19/17 19:06	84-74-2	
4,6-Dinitro-2-methylphenol	**<0.080**	mg/kg	0.27	0.080	1	12/19/17 10:37	12/19/17 19:06	534-52-1	
2,4-Dinitrophenol	**<0.079**	mg/kg	0.26	0.079	1	12/19/17 10:37	12/19/17 19:06	51-28-5	
2,4-Dinitrotoluene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/19/17 19:06	121-14-2	
2,6-Dinitrotoluene	**<0.049**	mg/kg	0.16	0.049	1	12/19/17 10:37	12/19/17 19:06	606-20-2	
Di-n-octylphthalate	**<0.058**	mg/kg	0.19	0.058	1	12/19/17 10:37	12/19/17 19:06	117-84-0	
bis(2-Ethylhexyl)phthalate	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/19/17 19:06	117-81-7	
Fluoranthene	**<0.037**	mg/kg	0.12	0.037	1	12/19/17 10:37	12/19/17 19:06	206-44-0	
Fluorene	**<0.030**	mg/kg	0.10	0.030	1	12/19/17 10:37	12/19/17 19:06	86-73-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (7-10') **Lab ID: 40162435016** Collected: 12/13/17 11:45 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV FULL LIST MICROWAVE	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Hexachloro-1,3-butadiene	**<0.066**	mg/kg	0.22	0.066	1	12/19/17 10:37	12/19/17 19:06	87-68-3	
Hexachlorobenzene	**<0.043**	mg/kg	0.14	0.043	1	12/19/17 10:37	12/19/17 19:06	118-74-1	
Hexachlorocyclopentadiene	**<0.061**	mg/kg	0.20	0.061	1	12/19/17 10:37	12/19/17 19:06	77-47-4	
Hexachloroethane	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/19/17 19:06	67-72-1	
Indeno(1,2,3-cd)pyrene	**<0.056**	mg/kg	0.19	0.056	1	12/19/17 10:37	12/19/17 19:06	193-39-5	
Isophorone	**<0.040**	mg/kg	0.13	0.040	1	12/19/17 10:37	12/19/17 19:06	78-59-1	
2-Methylnaphthalene	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/19/17 19:06	91-57-6	
2-Methylphenol(o-Cresol)	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/19/17 19:06	95-48-7	
3&4-Methylphenol(m&p Cresol)	**<0.047**	mg/kg	0.16	0.047	1	12/19/17 10:37	12/19/17 19:06		
Naphthalene	**<0.090**	mg/kg	0.30	0.090	1	12/19/17 10:37	12/19/17 19:06	91-20-3	
2-Nitroaniline	**<0.074**	mg/kg	0.25	0.074	1	12/19/17 10:37	12/19/17 19:06	88-74-4	
3-Nitroaniline	**<0.044**	mg/kg	0.15	0.044	1	12/19/17 10:37	12/19/17 19:06	99-09-2	
4-Nitroaniline	**<0.11**	mg/kg	0.36	0.11	1	12/19/17 10:37	12/19/17 19:06	100-01-6	
Nitrobenzene	**<0.052**	mg/kg	0.17	0.052	1	12/19/17 10:37	12/19/17 19:06	98-95-3	
2-Nitrophenol	**<0.081**	mg/kg	0.27	0.081	1	12/19/17 10:37	12/19/17 19:06	88-75-5	
4-Nitrophenol	**<0.065**	mg/kg	0.22	0.065	1	12/19/17 10:37	12/19/17 19:06	100-02-7	
N-Nitroso-di-n-propylamine	**<0.041**	mg/kg	0.14	0.041	1	12/19/17 10:37	12/19/17 19:06	621-64-7	
N-Nitrosodiphenylamine	**<0.35**	mg/kg	1.2	0.35	1	12/19/17 10:37	12/19/17 19:06	86-30-6	
2,2'-Oxybis(1-chloropropane)	**<0.067**	mg/kg	0.22	0.067	1	12/19/17 10:37	12/19/17 19:06	108-60-1	
Pentachlorophenol	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/19/17 19:06	87-86-5	
Phenanthrene	**<0.033**	mg/kg	0.11	0.033	1	12/19/17 10:37	12/19/17 19:06	85-01-8	
Phenol	**<0.061**	mg/kg	0.20	0.061	1	12/19/17 10:37	12/19/17 19:06	108-95-2	
Pyrene	**<0.057**	mg/kg	0.19	0.057	1	12/19/17 10:37	12/19/17 19:06	129-00-0	
1,2,4-Trichlorobenzene	**<0.029**	mg/kg	0.097	0.029	1	12/19/17 10:37	12/19/17 19:06	120-82-1	
2,4,5-Trichlorophenol	**<0.046**	mg/kg	0.15	0.046	1	12/19/17 10:37	12/19/17 19:06	95-95-4	
2,4,6-Trichlorophenol	**<0.039**	mg/kg	0.13	0.039	1	12/19/17 10:37	12/19/17 19:06	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	46	%	13-114		1	12/19/17 10:37	12/19/17 19:06	4165-60-0	
2-Fluorobiphenyl (S)	53	%	18-127		1	12/19/17 10:37	12/19/17 19:06	321-60-8	
Terphenyl-d14 (S)	74	%	41-109		1	12/19/17 10:37	12/19/17 19:06	1718-51-0	
Phenol-d6 (S)	45	%	30-97		1	12/19/17 10:37	12/19/17 19:06	13127-88-3	
2-Fluorophenol (S)	46	%	16-103		1	12/19/17 10:37	12/19/17 19:06	367-12-4	
2,4,6-Tribromophenol (S)	53	%	13-143		1	12/19/17 10:37	12/19/17 19:06	118-79-6	
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Acetone	**0.13**	mg/kg	0.048	0.015	1	12/18/17 05:00	12/19/17 11:23	67-64-1	
Benzene	**<0.0072**	mg/kg	0.024	0.0072	1	12/18/17 05:00	12/19/17 11:23	71-43-2	
Bromodichloromethane	**<0.0051**	mg/kg	0.017	0.0051	1	12/18/17 05:00	12/19/17 11:23	75-27-4	
Bromoform	**<0.0064**	mg/kg	0.021	0.0064	1	12/18/17 05:00	12/19/17 11:23	75-25-2	
Bromomethane	**<0.012**	mg/kg	0.039	0.012	1	12/18/17 05:00	12/19/17 11:23	74-83-9	
2-Butanone (MEK)	**<0.0071**	mg/kg	0.024	0.0071	1	12/18/17 05:00	12/19/17 11:23	78-93-3	
Carbon disulfide	**<0.0073**	mg/kg	0.024	0.0073	1	12/18/17 05:00	12/19/17 11:23	75-15-0	
Carbon tetrachloride	**<0.0077**	mg/kg	0.026	0.0077	1	12/18/17 05:00	12/19/17 11:23	56-23-5	
Chlorobenzene	**<0.0055**	mg/kg	0.018	0.0055	1	12/18/17 05:00	12/19/17 11:23	108-90-7	
Chloroethane	**<0.0067**	mg/kg	0.022	0.0067	1	12/18/17 05:00	12/19/17 11:23	75-00-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

Sample: 3019-05-B01 (7-10') **Lab ID: 40162435016** Collected: 12/13/17 11:45 Received: 12/14/17 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 8260								
Chloroform	**<0.0081**	mg/kg	0.027	0.0081	1	12/18/17 05:00	12/19/17 11:23	67-66-3	
Chloromethane	**<0.0064**	mg/kg	0.021	0.0064	1	12/18/17 05:00	12/19/17 11:23	74-87-3	
Dibromochloromethane	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/19/17 11:23	124-48-1	
1,1-Dichloroethane	**<0.0070**	mg/kg	0.023	0.0070	1	12/18/17 05:00	12/19/17 11:23	75-34-3	
1,2-Dichloroethane	**<0.0079**	mg/kg	0.026	0.0079	1	12/18/17 05:00	12/19/17 11:23	107-06-2	
1,1-Dichloroethene	**<0.0079**	mg/kg	0.026	0.0079	1	12/18/17 05:00	12/19/17 11:23	75-35-4	
cis-1,2-Dichloroethene	**<0.0080**	mg/kg	0.027	0.0080	1	12/18/17 05:00	12/19/17 11:23	156-59-2	
trans-1,2-Dichloroethene	**<0.0081**	mg/kg	0.027	0.0081	1	12/18/17 05:00	12/19/17 11:23	156-60-5	L1
1,2-Dichloropropane	**<0.0049**	mg/kg	0.016	0.0049	1	12/18/17 05:00	12/19/17 11:23	78-87-5	
cis-1,3-Dichloropropene	**<0.0038**	mg/kg	0.013	0.0038	1	12/18/17 05:00	12/19/17 11:23	10061-01-5	
trans-1,3-Dichloropropene	**<0.0037**	mg/kg	0.012	0.0037	1	12/18/17 05:00	12/19/17 11:23	10061-02-6	
Ethylbenzene	**<0.0057**	mg/kg	0.019	0.0057	1	12/18/17 05:00	12/19/17 11:23	100-41-4	
2-Hexanone	**<0.0045**	mg/kg	0.015	0.0045	1	12/18/17 05:00	12/19/17 11:23	591-78-6	
Methylene Chloride	**<0.0074**	mg/kg	0.025	0.0074	1	12/18/17 05:00	12/19/17 11:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<0.0050**	mg/kg	0.017	0.0050	1	12/18/17 05:00	12/19/17 11:23	108-10-1	
Methyl-tert-butyl ether	**<0.0077**	mg/kg	0.026	0.0077	1	12/18/17 05:00	12/19/17 11:23	1634-04-4	
Styrene	**<0.0063**	mg/kg	0.021	0.0063	1	12/18/17 05:00	12/19/17 11:23	100-42-5	
1,1,2,2-Tetrachloroethane	**<0.0052**	mg/kg	0.017	0.0052	1	12/18/17 05:00	12/19/17 11:23	79-34-5	
Tetrachloroethene	**<0.0068**	mg/kg	0.023	0.0068	1	12/18/17 05:00	12/19/17 11:23	127-18-4	
Toluene	**<0.0054**	mg/kg	0.018	0.0054	1	12/18/17 05:00	12/19/17 11:23	108-88-3	
1,1,1-Trichloroethane	**<0.0082**	mg/kg	0.027	0.0082	1	12/18/17 05:00	12/19/17 11:23	71-55-6	
1,1,2-Trichloroethane	**<0.0059**	mg/kg	0.020	0.0059	1	12/18/17 05:00	12/19/17 11:23	79-00-5	
Trichloroethene	**<0.0053**	mg/kg	0.018	0.0053	1	12/18/17 05:00	12/19/17 11:23	79-01-6	
Vinyl acetate	**<0.0061**	mg/kg	0.020	0.0061	1	12/18/17 05:00	12/19/17 11:23	108-05-4	
Vinyl chloride	**<0.0069**	mg/kg	0.023	0.0069	1	12/18/17 05:00	12/19/17 11:23	75-01-4	
Xylene (Total)	**<0.018**	mg/kg	0.061	0.018	1	12/18/17 05:00	12/19/17 11:23	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	111	%	70-130		1	12/18/17 05:00	12/19/17 11:23	1868-53-7	
Toluene-d8 (S)	105	%	70-130		1	12/18/17 05:00	12/19/17 11:23	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1	12/18/17 05:00	12/19/17 11:23	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**35.3**	%	0.10	0.10	1		12/16/17 14:44		
9040 pH	Analytical Method: EPA 9040								
pH at 25 Degrees C	**6.9**	Std. Units	0.10	0.010	1		12/19/17 12:51		6q,H6

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: 277546

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte was detected in the associated leach blank at a concentration of -0.017 mg/L.
2q	Analyte was detected in the associated leach blank.
3q	Analyte was detected in the associated method blank at a concentration of -0.0082 mg/L.
4q	Analyte was detected in the associated method blank at a concentration of -0.012mg/kg
5q	Analyte was detected in the associated method blank at a concentration of -0.012mg/kg.
6q	Due to the sample matrix, DI water was added to this sample on a one to one basis and the sample was stirred before analysis.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALIFIERS

Project: 0945.016 IDOT-PALOS HILLS
Pace Project No.: 40162435

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

40162435

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

(Please Print Clearly)

Company Name:	EDI / E and E
Branch/Location:	33 W Monroe, Chicago
Project Contact:	Nick Szymanski
Phone:	312-[illegible]45-1000-147
Project Number:	0945.016
Project Name:	IDCT - Pacosh/Us (Keen Ave)
Project State:	IL
Sampled By (Print):	Nick Szymanski
Sampled By (Sign):	[signature]
PO #:	
Regulatory Program:	

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO) — Y/N
PRESERVATION (CODE)* — Pick Letter

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	nszymanski@envdesigni.com
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, Sl = Sludge
W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

Analyses Requested: VOC, SVOC, Total Metals, pH, TCLP Metals, SPLP Metals*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
014	3019-05-B01 (0-7)	12-13-17	11:40	S	* SPLP ANALYSIS	3-40mL EEF 1-4oz P^A 2-4oz ag^A	
015	3019-05-B01-D (0-7)	12-13-17	11:40	S	Dependent upon	↓	
016	3019-05-B01 ([illegible])	[illegible]-13-17	11:45	S	initial Results	↓	
017	3019-05-B02 (0-1)	12-13-17	11:55	S	Hold samples after initial Results	↓	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	12/13/17 13:22	Kathleen Wendell	12/13/17 1322
Kathleen Wendell	12/13/17 1700	CS Logistics	12/13/17
CS Logistics	12/14/17 0945	[signature]	12/14/17 0945

PACE Project No. 40162435
Receipt Temp = 1.5 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06
ORIGINAL
C019a(27Jun2006)

Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: WO#: 40162435

40162435

Client Name: EDT

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Thermometer Used SR-4 **Type of Ice:** ☑ Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1 /Corr: 1.5 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☒ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 12/14/17
Initials: DS

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☑Yes	☐No		Date/Time: 12/14/17 1500 DS 12/14/17
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☐Yes	☑No	☐N/A	8. NO MS/MSD DS 12/14/17
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. All samples do not contain sample time on client labels DS 12/14/17
-Includes date/time/ID/Analysis Matrix:				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes	☐No	☑N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14.
Trip Blank Present:	☐Yes	☑No	☐N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: RMR for DM **Date:** 12/14/17