Washington University in St. Louis
ENVIRONMENTAL HEALTH & SAFETY

July 3, 2019

Annah Murray
Regional PCB Coordinator
Waste Remediation and Permitting Branch
Air and Waste Management Division
U.S. Environmental Protection Agency Region VII
11201 Renner Blvd
Lenexa, Kansas 66219

Re: Compton Hall

Dear Ms. Murray,

This is a notification regarding a June 2019 facilities project on our Compton Hall building, located on our main Danforth Campus, which resulted in the disposal of window caulk that we are treating as though contained PCBs.

On June 7, 2019, a member of the University's environmental health and safety staff observed contract workers performing tuckpointing on the north side of Compton Hall. Some of the tuckpointing work appeared to disturb existing caulk. Washington University in St. Louis (WUSTL) policy on caulk removal requires that caulk be tested prior to removal for the presence of PCBs. This caulk removed from Compton Hall was not tested prior to removal. However, WUSTL has confirmed that the tuckpointing contract workers wore heavy work gloves and half-face respirators during the project, thereby mitigating exposure potential.

Upon learning about this event, the University took several actions including:

- WUSTL submitted samples from remaining on-site waste for laboratory analysis. The sampling reports (attached) are inconsistent, indicating various PCB levels above and below regulatory actionable levels. However, the University is addressing this matter as though the caulk contained PCBs.
- WUSTL notified the contractor and disposal company about the possibility of PCB waste, and attempted to retrieve the waste for proper disposal. Unfortunately, the disposal company had already intermingled the waste and was unable to pinpoint the ultimate disposal location.
- WUSTL engaged an environmental company to gather all waste remaining on-site for proper disposal per PCB disposal requirements.
- WUSTL restricted access to the work site until caulk remnants were removed by an environmental company and staged for disposal.
- WUSTL has initiated an investigation to identify the root cause of this event and opportunities for process improvements.
- WUSTL Facilities Department personnel have completed refresher training on caulk removal requirements

WUSTL will be engaging a qualified environmental contractor to develop a work plan in accordance with EPA's guidance on caulk remediation.

Please feel free to contact me for further clarifications if needed.

Sincerely,

Linda Vishino

Linda Vishino
Director, Office of Environmental Compliance

RECEIVED
JUL 08 2019

Washington University in St. Louis, Campus Box 8229, 4533 Clayton Avenue, Suite 100, St. Louis, Missouri 63110
(314) 362-6816, Fax (314) 362-1995, http://ehs.wustl.edu/

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

June 19, 2019

Greg Chambliss
PSI, Inc.
8665 Olive Blvd.
Saint Louis, MO 63132

RE: Project: 0029-4192
Pace Project No.: 60305398

Dear Greg Chambliss:
Enclosed are the analytical results for sample(s) received by the laboratory on June 11, 2019. 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.

REV-1: Client requested duplicate analysis.

Lab Observation: Sample containers contain pieces of caulk of various colors. It's the opinion of the lab that PCBs are being detected at varying concentrations due to samples being non-homogeneous.

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

Sincerely,

Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

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CERTIFICATIONS

Project: 0029-4192
Pace Project No.: 60305398

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 19-016-0
Arkansas Drinking Water
Illinois Certification #: 004455
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Missouri SEKS Micro Certification: 10070
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-18-11
Utah Certification #: KS000212018-8
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587

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SAMPLE SUMMARY

Project: 0029-4192
Pace Project No.: 60305398

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60305398001	**COMP-PCB-1**	Solid	06/06/19 08:00	06/11/19 08:15

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SAMPLE ANALYTE COUNT

Project: 0029-4192
Pace Project No.: 60305398

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60305398001	COMP-PCB-1	EPA 8082	AJB1	8	PASI-K

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ANALYTICAL RESULTS

Project: 0029-4192
Pace Project No.: 60305398

Sample: COMP-PCB-1 **Lab ID: 60305398001** Collected: 06/06/19 08:00 Received: 06/11/19 08:15 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB SW	Analytical Method: EPA 8082 Preparation Method: EPA 3546							
PCB-1016 (Aroclor 1016)	ND	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	12674-11-2	
PCB-1016 (Aroclor 1016)	ND	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	11104-28-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	11141-16-5	
PCB-1232 (Aroclor 1232)	ND	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	53469-21-9	
PCB-1242 (Aroclor 1242)	ND	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	12672-29-6	
PCB-1248 (Aroclor 1248)	ND	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	12672-29-6	
PCB-1254 (Aroclor 1254)	**80400**	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	11097-69-1	
PCB-1254 (Aroclor 1254)	**3170**	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	31000	100	06/12/19 09:26	06/12/19 14:50	11096-82-5	
PCB-1260 (Aroclor 1260)	ND	ug/kg	446	1	06/13/19 14:55	06/15/19 03:19	11096-82-5	
Surrogates								
Decachlorobiphenyl (S)	51	%	28-143	1	06/13/19 14:55	06/15/19 03:19	2051-24-3	CL
Decachlorobiphenyl (S)	0	%	28-143	100	06/12/19 09:26	06/12/19 14:50	2051-24-3	CL,S4

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QUALITY CONTROL DATA

Project: 0029-4192
Pace Project No.: 60305398

QC Batch: 590110
QC Batch Method: EPA 3546
Associated Lab Samples: 60305398001

Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB

METHOD BLANK: 2419239
Associated Lab Samples: 60305398001

Matrix: Solid

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	32.6	06/12/19 13:22	
PCB-1221 (Aroclor 1221)	ug/kg	ND	32.6	06/12/19 13:22	
PCB-1232 (Aroclor 1232)	ug/kg	ND	32.6	06/12/19 13:22	
PCB-1242 (Aroclor 1242)	ug/kg	ND	32.6	06/12/19 13:22	
PCB-1248 (Aroclor 1248)	ug/kg	ND	32.6	06/12/19 13:22	
PCB-1254 (Aroclor 1254)	ug/kg	ND	32.6	06/12/19 13:22	
PCB-1260 (Aroclor 1260)	ug/kg	ND	32.6	06/12/19 13:22	
Decachlorobiphenyl (S)	%	62	28-143	06/12/19 13:22	CL

LABORATORY CONTROL SAMPLE: 2419241

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1221 (Aroclor 1221)	ug/kg	165	155	94	65-138	
PCB-1254 (Aroclor 1254)	ug/kg	165	129	78	65-138	
Decachlorobiphenyl (S)	%			70	28-143	CL

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0029-4192
Pace Project No.: 60305398

QC Batch: 590592
QC Batch Method: EPA 3546
Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB
Associated Lab Samples: 60305398001

METHOD BLANK: 2420921
Matrix: Solid
Associated Lab Samples: 60305398001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	33.0	06/17/19 15:50	
PCB-1221 (Aroclor 1221)	ug/kg	ND	33.0	06/17/19 15:50	
PCB-1232 (Aroclor 1232)	ug/kg	ND	33.0	06/17/19 15:50	
PCB-1242 (Aroclor 1242)	ug/kg	ND	33.0	06/17/19 15:50	
PCB-1248 (Aroclor 1248)	ug/kg	ND	33.0	06/17/19 15:50	
PCB-1254 (Aroclor 1254)	ug/kg	ND	33.0	06/17/19 15:50	
PCB-1260 (Aroclor 1260)	ug/kg	ND	33.0	06/17/19 15:50	
Decachlorobiphenyl (S)	%	81	28-143	06/17/19 15:50	

LABORATORY CONTROL SAMPLE: 2420922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1221 (Aroclor 1221)	ug/kg	162	182	112	65-138	
PCB-1254 (Aroclor 1254)	ug/kg	162	179	110	65-138	
Decachlorobiphenyl (S)	%			63	28-143	CL

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 0029-4192
Pace Project No.: 60305398

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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-K	Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0029-4192
Pace Project No.: 60305398

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60305398001	**COMP-PCB-1**	EPA 3546	590110	EPA 8082	590198
60305398001	**COMP-PCB-1**	EPA 3546	590592	EPA 8082	590904

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CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 60305398

60305398

r List Pace Workorder Number or
lere

LAB USE ONLY

Lab Project Manager:

Company: Professional Service Industries, Inc. (PSI)	Billing Information:
Address: 8669 Olive Boulevard; St. Louis, MO 63132	
Report To: Greg Chambliss	Email To: greg.chambliss@intertek.com
Copy To:	Site Collection Info/Address: Compton Hall; St. Louis
Customer Project Name/Number: 0029-4192	State: MO / County/City: St. Louis / Time Zone Collected: [ ]PT [ ]MT [✓]CT [ ]ET
Phone: 314-432-8073 Email: greg.chambliss@intertek.com	Site/Facility ID #: / Compliance Monitoring? [ ] Yes [✓] No
Collected By (print): Chris	Purchase Order # : Quote #: 00061805 / DW PWS ID #: DW Location Code:
Collected By (signature): Greg Chambliss for	Turnaround Date Required: 1-day / Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [X] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) / Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
60305398

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	EPA 8082 - PCBs in Window Caulk									
Comp-PCB-1	Window	Grab						1	X	WGFU								001

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: Bbl bag.

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: 7754 2749 9950
FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: T-248
Cooler 1 Temp Upon Receipt: 2.3 oC
Cooler 1 Therm Corr. Factor: -0.1 oC
Cooler 1 Corrected Temp: 2.7 oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Greg Chambliss / PSI	6/10/19	[signature] / Pace	6/11/19 0815
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: _____ of: _____

Pace Analytical

60305398

Sample Receiving Non-Conformance Form (NCF)

Date: 6.11.2019	Evaluated by: Garrett G.
Client: PSI	

Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

2. If COC is incomplete, check applicable issues below and add details where appropriate:

	Collection date/time missing or incorrect		Analyses or analytes: missing or clarification needed		Samples listed on COC do not match samples received (missing, additional, etc.)
	Sample IDs on COC do not match sample labels		Required trip blanks were not received		Required signatures are missing

Comments/Details/Other Issues not listed above:

No time or date on COC or sample.

3. Sample integrity issues: check applicable issues below and add details where appropriate:

	Samples: Past holding time		Samples: Condition needs to be brought to lab personnel's attention (details below)		Preservation: Improper
	Samples: Not field filtered		Containers: Broken or compromised		Temperature: not within acceptance criteria (typically 0-6C)
	Samples: Insufficient volume received		Containers: Incorrect		Temperature: Samples arrived frozen
	Samples: Cooler damaged or compromised		Custody Seals: Missing or compromised on samples, trip blanks or coolers		Vials received with improper headspace
	Samples: contain chlorine or sulfides		Packing Material: Insufficient/Improper		Other:

Comments/Details:

4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:

Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added.
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

5. Client Contact: If client is contacted for any issue listed above, fill in details below:

Client:	Contacted per:	
PM Initials:	Date/Time.	

Client Comments/Instructions:

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

July 02, 2019

Greg Chambliss
PSI, Inc.
8665 Olive Blvd.
Saint Louis, MO 63132

RE: Project: 0029-4192
Pace Project No.: 60305790

Dear Greg Chambliss:
Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2019. 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_rev.1 Per the client's request, the original result was investigated. Re-analysis of the sample indicated that the original result wasn't accurate.

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

Sincerely,

Heather M. Wilson

Heather Wilson for
Jamie Church
jamie.church@pacelabs.com
314-838-7223
Project Manager

Enclosures

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: 0029-4192
Pace Project No.: 60305790

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 19-016-0
Arkansas Drinking Water
Illinois Certification #: 004455
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212018-1
Oklahoma Certification #: 9205/9935
Missouri SEKS Micro Certification: 10070
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-18-11
Utah Certification #: KS000212018-8
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587

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SAMPLE SUMMARY

Project: 0029-4192
Pace Project No.: 60305790

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60305790001	**COMP-PCB-2**	Solid	06/13/19 09:15	06/14/19 11:39

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SAMPLE ANALYTE COUNT

Project: 0029-4192
Pace Project No.: 60305790

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60305790001	COMP-PCB-2	EPA 8082	AJB1	8	PASI-K

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ANALYTICAL RESULTS

Project: 0029-4192
Pace Project No.: 60305790

Sample: COMP-PCB-2 **Lab ID: 60305790001** Collected: 06/13/19 09:15 Received: 06/14/19 11:39 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB SW	Analytical Method: EPA 8082 Preparation Method: EPA 3546							
PCB-1016 (Aroclor 1016)	ND	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	12672-29-6	
PCB-1254 (Aroclor 1254)	**47900000**	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	15300000	100000	06/14/19 14:34	06/28/19 13:16	11096-82-5	
Surrogates								
Decachlorobiphenyl (S)	0	%	28-143	100000	06/14/19 14:34	06/28/19 13:16	2051-24-3	CH,S4

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QUALITY CONTROL DATA

Project: 0029-4192
Pace Project No.: 60305790

QC Batch: 590775
QC Batch Method: EPA 3546
Associated Lab Samples: 60305790001

Analysis Method: EPA 8082
Analysis Description: 8082 GCS PCB

METHOD BLANK: 2421716
Matrix: Solid
Associated Lab Samples: 60305790001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	32.5	06/19/19 00:36	
PCB-1221 (Aroclor 1221)	ug/kg	ND	32.5	06/19/19 00:36	
PCB-1232 (Aroclor 1232)	ug/kg	ND	32.5	06/19/19 00:36	
PCB-1242 (Aroclor 1242)	ug/kg	ND	32.5	06/19/19 00:36	
PCB-1248 (Aroclor 1248)	ug/kg	ND	32.5	06/19/19 00:36	
PCB-1254 (Aroclor 1254)	ug/kg	ND	32.5	06/19/19 00:36	
PCB-1260 (Aroclor 1260)	ug/kg	ND	32.5	06/19/19 00:36	
Decachlorobiphenyl (S)	%	96	28-143	06/19/19 00:36	

LABORATORY CONTROL SAMPLE: 2421717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1221 (Aroclor 1221)	ug/kg	165	108	65	65-138	
PCB-1254 (Aroclor 1254)	ug/kg	165	124	76	65-138	
Decachlorobiphenyl (S)	%			73	28-143	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: 0029-4192
Pace Project No.: 60305790

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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-K	Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0029-4192
Pace Project No.: 60305790

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60305790001	**COMP-PCB-2**	EPA 3546	590775	EPA 8082	591187

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CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 60305790

60305790

List Pace Workorder Number or here

LAB USE ONLY

Company: Professional Service Industries, Inc. (PSI)	Billing Information:
Address: 8669 Olive Boulevard; St. Louis, MO 63132	
Report To: Greg Chambliss	Email To: greg.chambliss@intertek.com
Copy To:	Site Collection Info/Address: Compton Hall; St. Louis
Customer Project Name/Number: 0029-4192	State: MO / County/City: St. Louis / Time Zone Collected: [ ]PT [ ]MT [X]CT [ ]ET
Phone: 314-432-8073 Email: greg.chambliss@intertek.com	Site/Facility ID #: WU - Compton Hall / Compliance Monitoring? [ ] Yes [✓] No
Collected By (print): Client	Purchase Order # : / Quote #: / DW PWS ID #: / DW Location Code:
Collected By (signature):	Turnaround Date Required: 1-day / Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____	Rush: [ ] Same Day [X] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) / Field Filtered (if applicable): [ ] Yes [ ] No / Analysis: ____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Analyses

Lab Profile/Line:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	EPA 8082 - PCBs in Window Caulk									
											AJ 6/4/19							
Comp-PCB-2	Window	Grab	6/13/2019	9:15	6/13/2019	9:15			X		LWGFU							001

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: ____			
Sample pH Acceptable	Y	N	NA
pH Strips: ____			
Sulfide Present	Y	N	NA
Lead Acetate Strips: ____			

LAB USE ONLY:
Lab Sample # / Comments:
60305790

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 13bl bag

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 7754 6897 8750

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: T-299
Cooler 1 Temp Upon Receipt: 5.2oC
Cooler 1 Therm Corr. Factor: 0.3oC
Cooler 1 Corrected Temp: 5.5oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY
PSI	6/13/19		6-14-19 0945	Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

June 21, 2019

Greg Chambliss
Professional Service Industries, Inc.
8669 Olive Blvd.
St. Louis, MO 63132
TEL: (314) 432-8073
FAX: (314) 432-5119

RE: Compton Hall / 0029-4192

WorkOrder: 19061275

Dear Greg Chambliss:

TEKLAB, INC received 1 sample on 6/19/2019 4:40:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

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

Report Contents

Client: Professional Service Industries, Inc.
Client Project: Compton Hall / 0029-4192

Work Order: 19061275
Report Date: 21-Jun-2019

This reporting package includes the following:

Cover Letter	1
Report Contents	2
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Quality Control Results	7
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Definitions

Client: Professional Service Industries, Inc. **Work Order:** 19061275

Client Project: Compton Hall / 0029-4192 **Report Date:** 21-Jun-2019

Abbr Definition

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

Qualifiers

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

Case Narrative

http://www.teklabinc.com/

Client: Professional Service Industries, Inc.

Client Project: Compton Hall / 0029-4192

Work Order: 19061275

Report Date: 21-Jun-2019

Cooler Receipt Temp: 2.4 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Accreditations

Client: Professional Service Industries, Inc.
Work Order: 19061275
Client Project: Compton Hall / 0029-4192
Report Date: 21-Jun-2019

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2020	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2020	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2020	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2020	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2019	Collinsville
Arkansas	ADEQ	88-0966		3/14/2020	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2020	Collinsville
Kentucky	KDEP	98006		12/31/2019	Collinsville
Kentucky	UST	0073		1/31/2020	Collinsville
Louisiana	LDPH	LA016		12/31/2019	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Tennessee	TDEC	04905		1/31/2020	Collinsville

Client: Professional Service Industries, Inc.
Work Order: 19061275
Client Project: Compton Hall / 0029-4192
Report Date: 21-Jun-2019
Lab ID: 19061275-001
Client Sample ID: Compton-PCB-TL1
Matrix: SOLID
Collection Date: 06/06/2019 0:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3550B, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	546000		**ND**	µg/Kg	1000	06/20/2019 21:06	154415
Aroclor 1221	NELAP	546000		**ND**	µg/Kg	1000	06/20/2019 21:06	154415
Aroclor 1232	NELAP	546000		**ND**	µg/Kg	1000	06/20/2019 21:06	154415
Aroclor 1242	NELAP	546000		**ND**	µg/Kg	1000	06/20/2019 21:06	154415
Aroclor 1248	NELAP	546000		**ND**	µg/Kg	1000	06/20/2019 21:06	154415
Aroclor 1254	NELAP	10900000		**97100000**	µg/Kg	20000	06/21/2019 13:33	154415
Aroclor 1260	NELAP	546000		**ND**	µg/Kg	1000	06/20/2019 21:06	154415
Surr: Decachlorobiphenyl	*	21.6-145	S	**2819**	%REC	1000	06/20/2019 21:06	154415
Surr: Tetrachloro-meta-xylene	*	19.8-124	S	**226.9**	%REC	1000	06/20/2019 21:06	154415

Surrogate recovery is outside control limits due to matrix interference.
Elevated reporting limit due to matrix interference.

Client: Professional Service Industries, Inc. **Work Order:** 19061275

Client Project: Compton Hall / 0029-4192 **Report Date:** 21-Jun-2019

SW-846 3550B, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 154415 **SampType: MBLK** Units **µg/Kg**

SampID: MBLK-154415

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	37.5		**ND**						06/19/2019
Aroclor 1221	37.5		**ND**						06/19/2019
Aroclor 1232	37.5		**ND**						06/19/2019
Aroclor 1242	37.5		**ND**						06/19/2019
Aroclor 1248	37.5		**ND**						06/19/2019
Aroclor 1254	37.5		**ND**						06/19/2019
Aroclor 1260	37.5		**ND**						06/19/2019
Surr: Decachlorobiphenyl			**6.8**	8.300		82.1	60.5	141	06/19/2019
Surr: Tetrachloro-meta-xylene			**4.7**	8.300		56.2	40.1	112	06/19/2019

Batch 154415 **SampType: LCS** Units **µg/Kg**

SampID: LCSPCB-154415

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	37.5		**131**	166.7	0	78.5	60.5	110	06/19/2019
Aroclor 1260	37.5		**148**	166.7	0	88.6	62.8	138	06/19/2019
Surr: Decachlorobiphenyl			**7.6**	8.300		91.3	60.5	141	06/19/2019
Surr: Tetrachloro-meta-xylene			**5.6**	8.300		67.5	40.1	112	06/19/2019

Batch 154415 **SampType: MS** Units **µg/Kg-dry**

SampID: 19060519-001BMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	98.7		**287**	438.7	0	65.4	37.6	121	06/20/2019
Aroclor 1260	98.7		**306**	438.7	0	69.7	52.5	135	06/20/2019
Surr: Decachlorobiphenyl			**17.9**	21.84		81.9	21.6	145	06/20/2019
Surr: Tetrachloro-meta-xylene			**15.2**	21.84		69.5	19.8	124	06/20/2019

Batch 154415 **SampType: MSD** Units **µg/Kg-dry** RPD Limit **40**

SampID: 19060519-001BMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016	98.7		**253**	438.7	0	57.7	286.7	12.48	06/20/2019
Aroclor 1260	98.7		**272**	438.7	0	61.9	305.7	11.81	06/20/2019
Surr: Decachlorobiphenyl			**16.0**	21.84		73.4			06/20/2019
Surr: Tetrachloro-meta-xylene			**13.3**	21.84		60.8			06/20/2019

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Professional Service Industries, Inc.

Client Project: Compton Hall / 0029-4192

Work Order: 19061275

Report Date: 21-Jun-2019

Carrier: Jacob Wilson

Received By: EAH

Completed by: Elizabeth A. Hurley
On: 19-Jun-2019

Reviewed by: Emily Pohlman
On: 20-Jun-2019

Pages to follow: Chain of custody [1] Extra pages included [0]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **2.4**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☑	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Print PDF

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 19061275

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: Professional Service Industries, Inc. (PSI)
Address: 8669 Olive Boulevard
City/State/Zip: St. Louis, MO 63132
Contact: Greg Chambliss Phone: 314-432-8073
Email: greg.chambliss@intertek.com Fax: 314-432-5119

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 2.4 °C LTG#1
Preserved in: [ ] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:

ONE DAY TAT

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [ ] Yes [✓] No

PROJECT NAME/NUMBER: Compton Hall / 0029-4192
SAMPLE COLLECTOR'S NAME: Tyler Doughty

RESULTS REQUESTED
[ ] Standard [✓] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

and Type of Containers / INDICATE ANALYSIS REQUESTED

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	EPA Method 8082	PCBs in Window Caulk	Courier
19061275-001	Compton-PCB-TL1	6/6/19	Sp Waste	X									✓	✓	
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												
			Aqueous												

Relinquished By	Date/Time	Received By	Date/Time
Greg Chambliss	6/19/19	[signature]	6/19/19 1555
[signature]	6/19/19 1640	Elizabeth A. Hurley	6/19/19 1640

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

June 26, 2019

Greg Chambliss
Professional Service Industries, Inc.
8669 Olive Blvd.
St. Louis, MO 63132
TEL: (314) 432-8073
FAX: (314) 432-5119

RE: Compton Hall / 0029-4192

WorkOrder: 19061548

Dear Greg Chambliss:

TEKLAB, INC received 1 sample on 6/24/2019 5:05:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

Emily Pohlman

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

Report Contents

Client: Professional Service Industries, Inc.

Client Project: Compton Hall / 0029-4192

Work Order: 19061548

Report Date: 26-Jun-2019

This reporting package includes the following:

Cover Letter	1
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Quality Control Results	7
Receiving Check List	9
Chain of Custody	Appended

Definitions

Client: Professional Service Industries, Inc. **Work Order:** 19061548

Client Project: Compton Hall / 0029-4192 **Report Date:** 26-Jun-2019

Abbr Definition

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

Qualifiers

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

Case Narrative

Client: Professional Service Industries, Inc.

Work Order: 19061548

Client Project: Compton Hall / 0029-4192

Report Date: 26-Jun-2019

Cooler Receipt Temp: 3.6 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

Client: Professional Service Industries, Inc.
Client Project: Compton Hall / 0029-4192

Work Order: 19061548
Report Date: 26-Jun-2019

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2020	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2020	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2020	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2020	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2019	Collinsville
Arkansas	ADEQ	88-0966		3/14/2020	Collinsville
Illinois	IDPH	17584		5/31/2019	Collinsville
Indiana	ISDH	C-IL-06		1/31/2020	Collinsville
Kentucky	KDEP	98006		12/31/2019	Collinsville
Kentucky	UST	0073		1/31/2020	Collinsville
Louisiana	LDPH	LA016		12/31/2019	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2019	Collinsville
Tennessee	TDEC	04905		1/31/2020	Collinsville

Teklab Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Professional Service Industries, Inc.
Work Order: 19061548
Client Project: Compton Hall / 0029-4192
Report Date: 26-Jun-2019
Lab ID: 19061548-001
Client Sample ID: Compton-PCB-TL2
Matrix: SOLID
Collection Date: 06/24/2019 0:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA SW846 3550C, 5035A, ASTM D2974								
Percent Moisture	*	0.1		**19.0**	%	1	06/24/2019 17:54	R263568
SW-846 3550B, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	134000	SR	**ND**	µg/Kg-dry	100	06/26/2019 14:41	154646
Aroclor 1221	NELAP	134000		**ND**	µg/Kg-dry	100	06/26/2019 14:41	154646
Aroclor 1232	NELAP	134000		**ND**	µg/Kg-dry	100	06/26/2019 14:41	154646
Aroclor 1242	NELAP	134000		**ND**	µg/Kg-dry	100	06/26/2019 14:41	154646
Aroclor 1248	NELAP	134000		**ND**	µg/Kg-dry	100	06/26/2019 14:41	154646
Aroclor 1254	NELAP	134000		**339000**	µg/Kg-dry	100	06/26/2019 14:41	154646
Aroclor 1260	NELAP	134000	SR	**ND**	µg/Kg-dry	100	06/26/2019 14:41	154646
Surr: Decachlorobiphenyl	*	21.6-145	S	**118.5**	%REC	100	06/26/2019 14:41	154646
Surr: Tetrachloro-meta-xylene	*	19.8-124	S	**90.8**	%REC	100	06/26/2019 14:41	154646

Matrix spike recovery is outside control limits due to sample composition.
Elevated reporting limit due to sample composition.

Client: Professional Service Industries, Inc.

Work Order: 19061548

Client Project: Compton Hall / 0029-4192

Report Date: 26-Jun-2019

EPA SW846 3550C, 5035A, ASTM D2974

Batch R263568 **SampType:** LCS Units %

SampID: LCS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Percent Moisture	0.1		**99.0**	99.00	0	100.0	90	110	06/24/2019

Batch R263568 **SampType:** LCSQC Units %

SampID: LCSQC

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Percent Moisture	0.1		**99.0**	99.00	0	100.0	90	110	06/24/2019

SW-846 3550B, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 154646 **SampType:** MBLK Units µg/Kg

SampID: MBLK-154646

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	37.5		**ND**						06/26/2019
Aroclor 1221	37.5		**ND**						06/26/2019
Aroclor 1232	37.5		**ND**						06/26/2019
Aroclor 1242	37.5		**ND**						06/26/2019
Aroclor 1248	37.5		**ND**						06/26/2019
Aroclor 1254	37.5		**ND**						06/26/2019
Aroclor 1260	37.5		**ND**						06/26/2019
Surr: Decachlorobiphenyl			**8.3**	8.300		99.9	60.5	141	06/26/2019
Surr: Tetrachloro-meta-xylene			**6.1**	8.300		74.0	40.1	112	06/26/2019

Batch 154646 **SampType:** LCS Units µg/Kg

SampID: LCSPCB-154646

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	37.5		**135**	166.7	0	81.3	60.5	110	06/26/2019
Aroclor 1260	37.5		**147**	166.7	0	88.1	62.8	138	06/26/2019
Surr: Decachlorobiphenyl			**7.9**	8.300		95.5	60.5	141	06/26/2019
Surr: Tetrachloro-meta-xylene			**5.9**	8.300		71.5	40.1	112	06/26/2019

Batch 154646 **SampType:** MS Units µg/Kg-dry

SampID: 19061548-001AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016	138000	JS	**42000**	6114	0	692.0	37.6	121	06/26/2019
Aroclor 1260	138000	JS	**58000**	6114	0	955.9	52.5	135	06/26/2019
Surr: Decachlorobiphenyl			**323**	304.4		106.0	21.6	145	06/26/2019
Surr: Tetrachloro-meta-xylene		S	**0**	304.4		0	19.8	124	06/26/2019

Client: Professional Service Industries, Inc.

Work Order: 19061548

Client Project: Compton Hall / 0029-4192

Report Date: 26-Jun-2019

SW-846 3550B, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch **154646** **SampType:** **MSD** Units **µg/Kg-dry** RPD Limit **40**

SampID: 19061548-001AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016	124000	SR	**1330000**	5514	0	24060	42310	187.64	06/26/2019
Aroclor 1260	124000	SR	**4060000**	5514	0	73550	58450	194.32	06/26/2019
Surr: Decachlorobiphenyl		S	**4710**	274.5		1714			06/26/2019
Surr: Tetrachloro-meta-xylene			**192**	274.5		69.9			06/26/2019

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Professional Service Industries, Inc.

Client Project: Compton Hall / 0029-4192

Work Order: 19061548

Report Date: 26-Jun-2019

Carrier: Jacob Wilson

Received By: AMD

Completed by: Amber Dilallo
On: 24-Jun-2019

Reviewed by: Elizabeth A. Hurley
On: 24-Jun-2019

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **3.6**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☑	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Print PDF

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 1904 1548

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: Professional Service Industries, Inc. (PSI)
Address: 8669 Olive Boulevard
City/State/Zip: St. Louis, MO 63132
Contact: Greg Chambliss Phone: 314-432-8073
Email: greg.chambliss@intertek.com Fax: 314-432-5119

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 3.6 °C IJ (#1)
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:
Only one container received. Dm 6/24/19

Client Comments:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☑ No

PROJECT NAME/NUMBER: Compton Hall / 0029-4192

SAMPLE COLLECTOR'S NAME: Client

RESULTS REQUESTED
☐ Standard ☑ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	EPA Method 8082	PCBs in Window Caulk										
P0411548-GC1	Compton-PCB-TL2	6/24/19	Sp Waste	X									✓	✓		Please Composite Sample								
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					
			Aqueous																					

ONE DAY TAT
Courier

Relinquished By	Date/Time	Received By	Date/Time
Greg Chambliss	6/24/19		
	6/24/19 1705	[illegible]	6/24/19 1705

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions