

September 8, 2017

James S. Haklar, Ph.D. Sr. PCB Disposal Specialist Division of Enforcement and Compliance Assistance United States Environmental Protection Agency – Region 2

Re: Building and Steel Materials PCB Evaluation 450-490 South Avenue and 50 Center Street Borough of Garwood Block 401, Lots 1 and 2 Union County, New Jersey NJDEP PI# 032470 and 631620

Dear Dr. Haklar:

This letter has been prepared on behalf of South Ave Urban Renewal, LLC, to summarize the results of the building materials Polychlorinated Biphenyl (PCB) evaluation and the results of the building dust and steel wipe sampling conducted within the buildings at 450-490 South Avenue and 50 Center Street in Garwood, New Jersey. The evaluations were conducted by Environmental Health Investigations, Inc. (EHI) under the oversight of William Kerbel, a Certified Industrial Hygienist (CIH), in accordance with the protocols set forth in correspondence between EcolSciences, Inc. (EcolSciences) and the United State Environmental Protection Agency (USEPA) dated November 9, 2016 and March 16, 2017. The sampling was conducted in accordance with 40 CFR 761 regulations, with PCB extraction conducted in accordance with method 3550C and PCB analysis via method 8082A in accordance with 40 CFR 761 subpart N. The EHI Reports are included in Attachments A and B. A discussion of the sampling is as follows.

Building Materials Evaluation

The building materials PCB sampling was conducted in accordance with the USEPA Comment 7 response in EcolSciences' November 9, 2016 letter and is discussed as follows. The laboratory analysis was conducted by IAL Laboratories in Randolph, New Jersey.

450-490 South Avenue (Block 401, Lot 1)

Eight distinct building materials potentially containing PCBs were identified in this portion of the Site by EHI as set forth in the following table. One five-point composite sample was collected from each of the building materials. The results are as follows:

Material	PCB Concentration (mg/kg)
Window Caulk – White	ND (0.076)
Window Glazing – White	0.768
Window Caulk – Grey	ND (0.143)
Door Caulk – White	ND (0.077)
Window Caulk – Tan	ND (0.154)
Asphalt Siding	26,700
Window Glazing – Pink	ND (0.014)

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Material	PCB Concentration (mg/kg)
Roof Tar	ND (0.568)

value in parenthesis indicates the method detection limit

The asphalt siding covers approximately 2,000 square feet of wall portions of the building.

50 Center Street (Block 401, Lot 2)

Six distinct building materials potentially containing PCBs were identified in this portion of the Site as set forth in the following table. One five point composite sample was collected from each of the building materials.

Material	PCB Concentration (mg/kg)
Garage Door Caulk	0.371
Window Caulk – Tan	ND (0.014)
Window Glazing – White	1.35
Window Glazing – Pink	0.729
Floor Tar associated with wood block floor	ND (0.304)
Waterproof Coating	ND (0.293)

value in parenthesis indicates the method detection limit

Building Materials Evaluation Conclusions

As indicated in the tables above, with the exception of the asphalt siding in the 450-490 South Avenue building (Lot 1), PCBs were not detected in the building materials above 50 mg/kg, the PCB bulk product waste threshold. A copy of EHI's report of findings is attached.

The asphalt siding materials PCB bulk product waste and the attached wall material will be appropriately handled as one material during demolition and disposed of as PCB bulk product waste at either Conestoga Landfill in Morgantown, Pennsylvania (a facility proposed in the November 9, 2016 correspondence for receiving PCB remediation waste below 50 mg/kg) or at ACUA Landfill in Egg Harbor, New Jersey. Both landfills are acceptable facilities for PCB bulk product waste pursuant to 40 CFR 761.62. During demolition, the PCB bulk product waste will be handled carefully in accordance with 40 CFR 761 to prevent cross contamination of other materials and all equipment will be properly decontaminated. The remaining construction and demolition building materials will be handled in accordance with traditional construction and demolition debris practices.

Building Dust and Steel Wipe Sampling

The dust and steel materials wipe PCB sampling is discussed in the following subsections. The laboratory analysis was conducted by EMSL Analytical, Inc. of Cinnaminson, New Jersey. EHI conducted the wipe sampling from discrete 100 square centimeter areas in accordance with 40 CR 761 subpart G.

Dust Characterization Wipe Sampling – Area 5

The dust sampling was conducted in accordance with EcolSciences' March 16, 2017 correspondence to the USEPA. Specifically, six wipe samples were collected from the flat, horizontal surfaces where dusts would accumulate in the 'Area 5' portion of the property. This portion of the building was utilized by ALCOA for die casting operations and PCB hydraulic oils are suspected to have been utilized during ACLOA's operations in this portion of the building as indicated on the mapping presented in our January 27, 2017 correspondence. The

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purpose of this sampling was to determine if aerosol or mist discharges of PCBs may have occurred in the past and whether these discharges contaminated the dust on horizontal surfaces above the areas where PCBs were utilized on the Site. Samples were collected from five different areas and labeled samples 1 through 5, with a duplicate sample (sample 6) collected from sample location 4. A blank sample was also analyzed in accordance with our March 16, 2017 correspondence.

Total PCB concentrations ranged from 3.09 micrograms/100 square centimeters ($\mu g/100 \text{cm}^2$) to 18.7 $\mu g/100 \text{cm}^2$. Two of the five samples, samples 4 and 5 (and sample 6, the duplicate of sample 4), collected from the easternmost portion of Area 5 contained total PCB concentrations marginally above the 10 $\mu g/100 \text{cm}^2$ threshold up to a maximum concentration of 18.7 $\mu g/100 \text{cm}^2$, well below 100 $\mu g/100 \text{cm}^2$.

Steel Materials Wipe Sampling - Areas 1-3

During our March 9, 2017 site inspection and as indicated in our March 16, 2017 correspondence, the USEPA required the steel materials of the building to be wipe sampled for PCBs after demolition and before transfer to a general scrap yard to ensure that PCBs potentially associated with building materials (i.e. PCB bulk product materials) did not contaminate the steel during demolition activities. As a precautionary measure and to preemptively understand potential costs associated with managing the steel during demolition, South Ave Urban Renewal, LLC proceeded with characterizing the steel prior to demolition. In accordance with our March 16, 2017 correspondence, eleven wipe samples were conducted from the steel throughout the portions of the Site buildings where PCB remediation waste has not been identified below the building slab. Wipe sampling was not conducted in Area 4, which is an office area with no exposed structural steel. Samples were collected from ten different areas and labelled samples 1A through 11A, with a duplicate sample (sample 7A) collected from sample location 6A and a blank also analyzed.

The results indicated that PCB concentrations throughout the building primarily ranged from 0.77 μ g/100cm² to 16 μ g/100cm² with two samples containing PCBs above 10 μ g/100cm² at concentrations of 13.1 μ g/100cm² and 16 μ g/100cm². One sample point (6A) located in the southeastern portion of Area 2 exhibited a concentration of 105 μ g/100cm². A duplicate sample collected from the sample 6A location (sample 7A) contained PCBs at 91 μ g/100cm². The average PCB concentration at sample location 6A/7A is 98 μ g/100cm².

Dust and Steel Materials Conclusions

Based on this investigation which included analysis of eleven samples from throughout the building, the steel building components contain PCBs at low concentrations (ranging from $0.77\mu g/100 \text{cm}^2$ to $16 \mu g/100 \text{cm}^2$). One exception was identified at the 6A/7A location where PCBs were identified at an average concentration of 98 $\mu g/100 \text{cm}^2$.

To confirm that the steel building components in the vicinity of sample 6A/7A contain PCBs below 100 $\mu g/100 \text{cm}^2$ four additional wipe samples will be conducted from four discreet locations within approximately 20 feet of the 6A/7A location. Specifically, two vertical locations on the same steel truss approximately 20 feet away from location 6A/7A and two locations on adjacent separate trusses approximately 20 feet away will be sampled. Assuming the results from these four samples contain PCBs below 100 $\mu g/100 \text{cm}^2$, this area will have been confirmed to contain PCBs below 100 $\mu g/100 \text{cm}^2$. If PCBs are identified above 100 $\mu g/100 \text{cm}^2$ in this area, additional steel sampling will be conducted in consultation with USEPA to delineate the extent of the steel containing PCBs above 100 $\mu g/100 \text{cm}^2$ from the remainder of the building. The steel will then be addressed as follows:

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- The building will be demolished and the steel segregated into two waste streams one of steel containing PCBs above 100 μg/100cm² (if any such concentrations are identified) and a second for steel containing PCBs below 100 μg/100cm²;
- Based on the pre-demolition PCB concentrations, the steel waste stream containing PCBs below 100 µg/100cm² (anticipated to be all the steel within the building subject to the additional delineation sampling described above) will be wipe sampled prior to disposal with 10 samples collected and analyzed for PCBs;
- The steel containing PCBs below 100 μg/100cm² based on pre-demolition and post-demolition analysis will be transported for disposal in accordance with 40 CFR 761.61(a)(5)(i)B(2)(ii) at a Conestoga Landfill or ACUA Landfill or a scrap recycler/smelter pursuant to 40 CFR 761 subpart D (i.e. G&S Technologies in Kearny, New Jersey or equivalent);
- If any steel contains PCBs above 100 μg/100cm² based on pre and post-demolition sampling, it will be disposed at a RCRA subtitle C landfill or a TSCA landfill (i.e. CWM Chemical Services, LLC in Model City, New York or Wayne Disposal, Inc. in Belleville, Michigan, or equivalent);
- In the unlikely event that steel assumed to contain PCBs below $100 \ \mu g/100 \text{cm}^2$ based on pre-demolition sampling is found to exhibit PCBs above $100 \ \mu g/100 \text{cm}^2$ after demolition, the findings will be confirmed through additional testing and testing will be conducted to separate the steel with PCBs above $100 \ \mu g/100 \text{cm}^2$ from the remainder of the steel material. The testing will be conducted in consultation with the USEPA. The two steel waste streams will be disposed as discussed above

Should you have any questions, comments, or require additional information, please contact me at 973-366-9500. Thank you in advance for your immediate attention to this matter.

Very truly yours,

EcolSciences, Inc.

Peter A. Hansen, LSRP, LEP Vice President

Attachments

cc: Ed Russo, South Ave Urban Renewal, LLC David Loeffler, LSRP

Attachment A

EHI Building Materials Evaluation

EcolSciences, Inc. Environmental Management & Regulatory Compliance



655 West Shore Trail Sparta, New Jersey 07871 Phone/Fax: 973-729-5649 www.ehi-inc.com

Email: erusso@russodevelopment.com

July 7, 2017

Mr. Edward Russo Russo Development 570 Commerce Blvd. Carlstadt, NJ 07072

Re: Pre-Demolition PCB's in Building Materials
 Petro/Casale Properties
 450 South Avenue/50 Center St., Garwood, NJ
 EHI Project #: 0558-6923

Dear Mr. Russo:

Attached is our report relevant to the pre-demolition PCB's in building materials survey conducted at the Petro/Casale at 450 South Avenue/50 Center Street in Garwood, NJ.

Thank you for the opportunity to provide our services. Should you have any questions regarding this report, please do not hesitate to contact me.

Very truly yours,

Charles Hoffman

Charles Hoffman Sr. Project Manager



655 West Shore Trail Sparta, New Jersey 07871 Phone/Fax: 973-729-5649 www.ehi-inc.com

REPORT OF FINDINGS

PCB's in Building Materials

At:

Petro/Casale 450 South Avenue 50 Center Street Garwood, NJ

On Behalf Of:

Russo Development 570 Commerce Blvd. Carlstadt, NJ 07072

Date Conducted: June 29, 2017

Report Dated: July 7, 2017

EHI Project #: 0558-6923

1.0 Introduction

Environmental Health Investigations, Inc. (EHI) was retained by Russo Development to conduct predemolition PCB's in building materials survey at the former Petro/Casale located at 450 South Avenue and 50 Center Street in Garwood, New Jersey.

The work was conducted on June 29, 2017 by Charles Hoffman and Kennith Newsome of EHI.

The goal of the predemolition PCB in building materials survey was to ascertain whether certain building materials found on the site contained PCB's in concentrations greater than 50 ppm.

2.0 Sampling Methods

Composite samples of each type of building material were collected from multiple locations. Door caulk, window caulk, window glazing, waterproofing, mastics and tars on both the interior and exterior of the buildings were collected.

The samples were hand delivered for PCB analysis in accordance with Method 8082A to Integrated Analytical Laboratories in Randolph, New Jersey.

3.0 Results

Sample Identification	Type of Material	Location	PCB Concentration mg/kg
PCG-50-062917-1	Garage Door Caulk - Grey	Casale - 50 Center Street	0.371

Russo Development 450 South Avenue/50 Center Street Garwood, New Jersey

Sample Identification	Building	Location	PCB Concentration mg/kg
PCG-50-062917-2	Window Caulk - Tan	Casale - 50 Center Street	ND
PCG-50-062917-3	Window Glazing - White	Casale - 50 Center Street	1.35
PCG-50-062917-4	Window Glazing - Pink	Casale - 50 Center Street	0.729
PCG-50-062917-5	Floor Tar Associated w/ Wood Block Floor	Casale - 50 Center Street	ND
PCG-50-062917-6	Waterproof Coating	Casale - 50 Center Street	ND
PCG-450-062917-1	Window Caulk - White	Petro - 450 South Avenue	ND
PCG-450-062917-2	Window Glazing - White	Petro - 450 South Avenue	0.768
PCG-450-062917-3	Window Caulk - Grey	Petro - 450 South Avenue	ND
PCG-450-062917-4	Door Caulk - White	Petro - 450 South Avenue	ND
PCG-450-062917-5	Window Caulk - Tan	Petro - 450 South Avenue	ND
PCG-450-062917-6	Asphalt Siding	Petro - 450 South Avenue	26,700
PCG-450-062917-7	Window Glazing - Pink	Petro - 450 South Avenue	ND
PCG-450-062917-8	Roof Tar	Petro - 450 South Avenue	ND

4.0 Discussion

Those materials containing greater than 50 ppm total PCBs must be disposed of as PCB

bulk product waste.

Survey & Report By:

Charles Hoffman Charles Hoffman

Project Manager

Reviewed By:

William S. Kerbel

William S. Kerbel, CIH President

A P P E N D I X

IAL Laboratory Reports

SUMMARY REPORT

Client: Environmental Health Investigations, Inc.									
		Project	: CASALE/	PETRO G	ARWOOD	1			
Lab Case No.: E17-05390							0.004		
	LaD ID: Client ID:	0539 DCC 50	0-001 062017 1	0539 DCC 50	05390-002 DCC 50 0(2017 2		U-UUS 062017 3	U5390-004	
	Motriv	100-50-	Jid	100-50	-002917-2	1 CG-30-002717-3		1 CG-30-002917-4 Solid	
	Sampled Date	6/2	9/17	6/2	9/17	6/20/17		6/29/17	
PARAMETER (Units)	Samplea Date	Conc Q) MDL	Conc	Q MDL	Conc (Q MDL	Conc Q	MDL
PCB's (Units)		(mg	/Kg)	(<i>mg/Kg</i>)		(mg/Kg)		(mg/Kg)	
Aroclor-1016		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1221		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1232		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1242		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1248		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1254		0.371	0.015	ND	0.014	1.35	0.014	0.729	0.014
Aroclor-1260		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1262		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1268		ND	0.015	ND	0.014	ND	0.014	ND	0.014
PCBs		0.371	0.015	ND	0.014	1.35	0.014	0.729	0.014
	Lab ID:	0539	0-005	0539	0-006				
	Client ID:	PCG-50-	062917-5	PCG-50	-062917-6				
	Matrix:	So	lid	Se	olid				
	Sampled Date	6/2	9/17	6/2	9/17				
PARAMETER(Units)		Conc (Q MDL	Conc	Q MDL				
PCB's (Units)		(mg	/Kg)	(<i>m</i> g	r/Kg)				
Aroclor-1016		ND	0.304	ND	0.293				
Aroclor-1221		ND	0.304	ND	0.293				
Aroclor-1232		ND	0.304	ND	0.293				
Aroclor-1242		ND	0.304	ND	0.293				
Aroclor-1248		ND	0.304	ND	0.293				
Aroclor-1254		ND	0.304	ND	0.293				
Aroclor-1260		ND	0.304	ND	0.293				
Aroclor-1262		ND	0.304	ND	0.293				
Aroclor-1268		ND	0.304	ND	0.293				
PCBs		ND	0.304	ND	0.293				

ND = Analyzed for but Not Detected at the MDL

Client: Environmental Health Investigations, Inc.								
		Project: C	ASALE/Pi b Case No.	ETRO GARW : E17-05391	OOD			
Lab ID:	0539	1-001	053	91-002	0539	1-003	053	91-004
Client ID:	PCG-450	-062917-1	PCG-45	0-062917-2	PCG-450	-062917-3	PCG-45	0-062917-4
Matrix:	Solid		S	olid	Solid		S	Solid
Sampled Date	6/29/17		6/2	29/17	6/29/17		6/	29/17
PARAMETER(Units)	Conc	Q MDL	Conc	Q MDL	Conc	Q MDL	Conc Q MDL	
PCB's (Units)	(mg	/Kg)	(<i>m</i>	g/Kg)	(mg/Kg)		(mg/Kg)	
Aroclor-1016	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1221	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1232	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1242	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1248	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1254	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1260	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1262	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1268	ND	0.076	0.768	0.015	ND	0.143	ND	0.077
PCBs	ND	0.076	0.768	0.015	ND	0.143	ND	0.077
Lab ID:	0539	1-005	053	91-006	0539	1-007	053	91-008
Client ID:	PCG-450	-062917-5	PCG-45	0-062917-6	PCG-450	-062917-7	PCG-45	0-062917-8
Matrix:	Se	olid	S	olid	Se	olid	S	Solid
Sampled Date	6/2	9/17	6/2	29/17	6/2	9/17	6/	29/17
PARAMETER(Units)	Conc	Q MDL	Conc	Q MDL	Conc	Q MDL	Conc (2 MDL
PCB's (Units)	(mg	/Kg)	(<i>m</i>	g/Kg)	(<i>m</i> g	r/Kg)	(<i>m</i>	ng/Kg)
Aroclor-1016	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1221	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1232	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1242	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1248	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1254	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1260	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1262	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1268	ND	0.154	26700	D 285	ND	0.014	ND	0.568
PCBs	ND	0.154	26700	D 285	ND	0.014	ND	0.568
Lab ID:	0539 DCC 450	1-009						
Chent ID:	PCG-450	-062917-9						
Matrix:	50)110 0/17						
PARAMETER(Units)	Conc	Q MDL						
PCB's (Units)	(mg	/ K g)						
Aroclor-1016	ND	0.143						
Aroclor-1221	ND	0.143						
Aroclor-1232	ND	0.143						
Aroclor-1242	ND	0.143						
Aroclor-1248	ND	0.143						
Aroclor-1254	ND	0.143						
Aroclor-1260	ND	0.143						
Aroclor-1262	ND	0.143						
Aroclor-1268	ND	0.143						
PCBs	ND	0.143						
ND – Analyzed for but Not De	tected at the	MDI	•					

SUMMARY REPORT

ND = Analyzed for but Not Detected at the MDL

D = The compound was reported from the Diluted analysis



ANALYTICAL DATA REPORT

Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871

Project Name: CASALE/PETRO GARWOOD IAL Case Number: E17-05390

These data have been reviewed and accepted by:

Michan

Michael H. Lefth, Ph.D. Laboratory Director

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

273 Franklin Road Randolph, NJ 07869 Phone: 973 361 4252 Fax: 973 989 5288



IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

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This report was finalized on July 07, 2017	

* Methodology is included in the IAL Project Information Page

<u></u>	Sample Summary
IAL Case No.	Client Environmental Health Investigations, Inc.
E17-05390	Project CASALE/PETRO GARWOOD
	Received On <u>6/29/2017@12:30</u>
ab ID Client Sample II	<u>Depth Top/Bottom Sampling Time Matrix</u> <u>Depth Top/Bottom</u> <u>Sampling Time</u> <u>Matrix</u> <u>Containe</u>

n/a

n/a

n/a

n/a

n/a

1.4

PCG-50-062917-2

PCG-50-062917-4

PCG-50-062917-6

PCG-50-062917-5

05390-003 PCG-50-062917-3

05390-002

05390-004

05390-006

05390-005

6/29/2017@11:00

6/29/2017@11:00

6/29/2017@11:00

6/29/2017@11:00

6/29/2017@11:00 Solid

Solid

Solid

Solid

Solid

1

1

1

1.1.

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Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

- **<u>B</u>** Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.
- **<u>C</u>** Indicates analyte is a common laboratory contaminant.
- D Indicates analyte was reported from diluted analysis.
- E Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.
- <u>J</u> Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.
- N Presumptive evidence of a compound from the use of GC/MS library search.
- X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.
- **Z** Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

- **<u>RL</u>** Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.
- MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.
- PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.
 - ND Indicates analyte was analyzed for but not detected above the MDL.
 - **DF** Dilution Factor
- LCS Laboratory Control Sample
- LCSD Laboratory Control Sample Duplicate
 - MS Matrix Spike
- MSD Matrix Spike Duplicate
- **<u>DUP</u>** Duplicate

SAMPLE DELIVERY GROUP CASE NARRATIVE (Conformance / Non-Conformance Summary)

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E17-05390

Integrated Analytical Laboratories, LLC. received six (6) samples** from Environmental Health Investigations, Inc. (IAL SDG# **E17-05390**, Project: CASALE/PETRO GARWOOD) on June 29, 2017 for the analysis of :

(6) TCL PCB

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order. Cooler temperature was acceptable at 4 ± 2 °C

PCB By 8082A			Batch: 170629-14	Matrix: Solid					
QC	- Calibration curve met QC	Calibration curve met QC criteria.							
	 Surrogate percent recover DKQP criteria not met. 	Surrogate percent recovery did not meet QC criteria due to matrix interference for #005; #006. NJDEP DKQP criteria not met.							
	- Method blank met QC cr	iteria.							
	- LCS Percent Recovery n	net QC criteri	ia.						
	- RPD between MS/MSD r	net QC crite	ria.						
	- MS/MSD Percent Recov	ery met QC o	riteria.						
	- The RPD between the pr SW-846 8000D, the lowe	imary and se	condary column was >40% f	for the following samples: #001. Per					
	 The following samples w 006. 	ere cleaned	up using method 3660B to re	move sulfur: 001, 002, 003, 004, 005,					
E17-05390	- All samples were extract	ed within hole	ding time.						
	- All samples were analyze	ed within hold	ling time.						
	- Retention Time Shift me	t QC criteria.							
	Dilution Summary:								
	Sample ID	DF(s)	Dilution For						
	E17-05390-001	1	NA						
	E17-05390-002	1	NA						
	E17-05390-003	1	NA						
	E17-05390-004	1	NA						
	E17-05390-005	20	Matrix Interference.						

E17-05390-006 20 Matrix Interference.

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

7/6/2017 Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories
 Client: Environmental Health Investigations, Inc.
 Project Location: CASALE/PETRO GARWOOD
 IAL Project #: E17-05390
 IAL Sample ID(s): E17-05390-001 ~ -006
 Sampling Date(s): 6/29/2017

List of DKQP Method Used:

TCL PCB by 8082A

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Data of Known Quality."

		YES	NO	N/A
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP	x		
1A	Were the method specified handling, preservation, and holding time requirements met?	x		
1B	EPH Method: Was the EPH method conducted without significant modifications? (see Section 11.3 of respective DKQ methods)			x
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	x		
3	Were samples received at an appropriate temperature (4±2° C)?	X		
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?		x	
5A	Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt?		x	
5B	Were these reporting limits met?			X
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	x		
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set? $E17-05390$	0005-	X	

RESULTS SUMMARY REPORT

SUMMARY REPORT
Client: Environmental Health Investigations, Inc.
Project: CASALE/PETRO GARWOOD
Lab Case No. 1 E17 05200

Lab Case No.: E17-05390									
	Lab ID: 05390-001 05390-002					0539	0-003	0539)-004
	Client ID:	PCG-50-	062917-1	PCG-50	PCG-50-062917-2		062917-3	PCG-50-062917-4	
	Matrix:	So	lid	S	olid	So	lid	So	lid
Sa	mpled Date	6/29	0/17	6/2	29/17	6/29	9/17	6/29	//17
PARAMETER(Units)	-	Conc Q	MDL	Conc	Q MDL	Conc (<u>MDL</u>	Conc Q	MDL
PCB's (Units)		(mg/	(Kg)	. (m	g/Kg)	(mg)	/Kg)	(mg/	Kg)
Aroclor-1016		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1221		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1232		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1242		ND	0.015	ND	0 .014	ND	0.014	ND	0.014
Aroclor-1248		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1254		0.371	0.015	ND	0.014	1.35	0.014	0.729	0.014
Aroclor-1260		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1262		ND	0.015	ND	0.014	ND	0.014	ND	0.014
Aroclor-1268		ND	0.015	ND	0.014	ND	0.014	ND	0.014
PCBs		0.371	0.015	ND	0.014	1.35	0.014	0.729	0.014
	Lab ID:	0539	0-005	053	90-006				
	Client ID:	PCG-50-	062917-5	PCG-50	-062917-6				
	Matrix:	Sa	lid	S	olid				
Sa	mpled Date	6/2	9/17	6/2	29/17				
PARAMETER(Units)		Conc C	<u>MDL</u>	Conc	Q MDL				
PCB's (Units)		(mg	/Kg)	(m	g/Kg)				
Aroclor-1016		ND	0.304	ND	0.293				
Aroclor-1221		ND	0.304	ND	0.293				
Aroclor-1232		ND	0.304	ND	0.293				
Aroclor-1242		ND	0.304	ND	0.293				
Aroclor-1248		ND	0.304	ND	0.293				
Aroclor-1254		ND	0.304	ND	0.293				
Aroclor-1260		ND	0.304	ND	0.293				
Aroclor-1262		ND	0.304	ND	0.293				
Aroclor-1268		ND	0.304	ND	0.293				
2.02		ND	0 304	ND	0.293				

ND = Analyzed for but Not Detected at the MDL

E17-05390 0008

ANALYTICAL RESULTS

PCB's

Lab ID: E17-05390-001 Client ID: PCG-50-0 Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4365.D GC Column: DB-5/DB1701P Sample wt/vol: 5.37g Matrix-Units: Solid-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL	
Aroclor-1016	ND		0.037	0.015	
Aroclor-1221	ND		0.037	0.015	
Aroclor-1232	ND		0.037	0.015	
Aroclor-1242	ND		0.037	0.015	
Aroclor-1248	ND		0.037	0.015	
Aroclor-1254	0.371		0.037	0.015	
Aroclor-1260	ND		0.037	0.015	
Aroclor-1262	ND		0.037	0.015	
Aroclor-1268	ND		0.037	0.015	
PCBs	0.371		0.037	0.015	
D Dilution Performed	B Compound detected in Blank				

J ---- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05390-002 Client ID: PCG-50-0 Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4366.D GC Column: DB-5/DB1701P Sample wt/vol: 5.55g Matrix-Units: Solid-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL		
Aroclor-1016	ND		0.036	0.014		
Aroclor-1221	ND		0.036	0.014		
Aroclor-1232	ND		0.036	0.014		
Aroclor-1242	ND		0.036	0.014		
Aroclor-1248	ND		0.036	0.014		
Aroclor-1254	ND		0.036	0.014		
Aroclor-1260	ND		0.036	0.014		
Aroclor-1262	ND		0.036	0.014		
Aroclor-1268	ND		0.036	0.014		
PCBs	ND		0.036	0.014		
D Dilution Performed		B Compound detected in Blank				

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05390-003 Client ID: PCG-50-0 Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4367.D GC Column: DB-5/DB1701P Sample wt/vol: 5.67g Matrix-Units: Solid-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.035	0.014
Aroclor-1221	ND		0.035	0.014
Aroclor-1232	ND		0.035	0.014
Aroclor-1242	ND		0.035	0.014
Aroclor-1248	ND		0.035	0.014
Aroclor-1254	1.35		0.035	0.014
Aroclor-1260	ND		0.035	0.014
Aroclor-1262	ND		0.035	0.014
Aroclor-1268	ND		0.035	0.014
PCBs	1.35		0.035	0.014
			D. Compound do	tected in Blank

D --- Dilution Performed

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

B ---- Compound detected in Blank

PCB's

Lab ID: E17-05390-004 Client ID: PCG-50-0 Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4368.D GC Column: DB-5/DB1701P Sample wt/vol: 5.80g Matrix-Units: Solid-mg/Kg Dilution Factor: 1 % Moisture: NA

C --- Common laboratory contamination

Compound	Concentration	Q	RL	MDL	
Aroclor-1016	ND		0.035	0.014	
Aroclor-1221	ND		0.035	0.014	
Aroclor-1232	ND		0.035	0.014	
Aroclor-1242	ND		0.035	0.014	
Aroclor-1248	ND		0.035	0.014	
Aroclor-1254	0.729		0.035	0.014	
Aroclor-1260	ND		0.035	0.014	
Aroclor-1262	ND		0.035	0.014	
Aroclor-1268	ND		0.035	0.014	
PCBs	0.729		0.035	0.014	
D Dilution Performed	B Compound detected in Blank				

D --- Dilution Performed

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05390-005 Client ID: PCG-50-0 Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4369.D GC Column: DB-5/DB1701P Sample wt/vol: 5.26g Matrix-Units: Solid-mg/Kg Dilution Factor: 20 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.760	0.304
Aroclor-1221	ND		0.760	0.304
Aroclor-1232	ND		0.760	0.304
Aroclor-1242	ND		0.760	0.304
Aroclor-1248	ND		0.760	0.304
Aroclor-1254	ND		0.760	0.304
Aroclor-1260	ND		0.760	0.304
Aroclor-1262	ND		0.760	0.304
Aroclor-1268	ND		0.760	0.304
PCBs	ND		0.760	0.304
D Dilution Performed		B Compound detected in Blank		

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05390-006 Client ID: PCG-50-0 Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4370.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.46g Matrix-Units: Solid-mg/Kg Dilution Factor: 20 % Moisture: NA

Compound	Concentration	Q	RL	MDL	
Aroclor-1016	ND		0.733	0.293	
Aroclor-1221	ND		0.733	0.293	
Aroclor-1232	ND		0.733	0.293	
Aroclor-1242	ND		0.733	0.293	
Aroclor-1248	ND		0.733	0.293	
Aroclor-1254	ND		0.733	0.293	
Aroclor-1260	ND		0.733	0.293	
Aroclor-1262	ND		0.733	0.293	
Aroclor-1268	ND		0.733	0.293	
PCBs	ND		0.733	0.293	
		B Compound detected in Blank			
Value Less than RL & greater than MDI			C Common labo	ratory contamination	

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB DATA

E17-05390 0016

PCB QC SUMMARY

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed:

07/05/2017

	Lab		TCMX 1	DCB 1		TCMX 2		DCB 2	
Client ID	Sample ID	Matrix	% rec #	% rec	#	% rec	#	% rec	#
РСВ	BLKS170629-14	SOIL	95	64		94		84	
РСВ	LCSS170629-14	SOIL	97	67		95		107	
PCB	E17-05390-001MS	SOLID	73	57		88		91	
РСВ	E17-05390-001MS	SOLID	74	67		88		88	
PCG-50-0	E17-05390-001	SOLID	80	75		96		106	
PCG-50-0	E17-05390-002	SOLID	80	76		100		125	
PCG-50-0	E17-05390-003	SOLID	83	107		99		166	
PCG-50-0	E17-05390-004	SOLID	87	75		99		107	
PCG-50-0	E17-05390-005	SOLID	68	324	Μ	84		410	Μ
PCG-50-0	E17-05390-006	SOLID	106	130		96		704	Μ
PCG-450-	E17-05391-001	SOLID	93	64		90		73	
PCG-450-	E17-05391-002	SOLID	84	62		98		117	
PCG-450-	E17-05391-003	SOLID	91	95		93		89	
PCG-450-	E17-05391-004	SOLID	92	61		99		96	
PCG-450-	E17-05391-005	SOLID	95	64		93		112	
PCG-450-	E17-05391-006	SOLID	0 0	0 0	D	0	D	0	D
PCG-450-	E17-05391-007	SOLID	84	67		97		115	
PCG-450-	E17-05391-008	SOLID	80	108		84		132	
PCG-450-	E17-05391-009	SOLID	98	82		100		127	
PCG-450-	E17-05391-006DL	SOLID	0 [0 0	D	0	D	0	D

Surrogate QC Limits	<u>Soil</u>	<u>Aqueous/Leachate</u>
TCMX = Tetrachloro-m-xylene	25-162	52-131
DCB = Decachlorobiphenyl	24-172	58-149

Column used to flag recovery values that did not meet criteria* Values outside of QC limits

D Surrogate diluted out

M Matrix interference

PCB LCS ACCURACY REPORT

Lab ID: LCSS170629-14	GC Column: DB-5/DB170			
Date Received: NA	Sample wt/vol: 5g			
Date Extracted: 06/29/2017	Matrix-Units: Soil-µg/Kg			
Date Analyzed: 07/05/2017	% Moisture: NA			
Data file: Y4362.D	Dilution Factor: 1			

	Conc.		Conc.	%Rec.	QC	
Compound	Add	Sample	LCS	LCS	# Limits	
Aroclor-1016	500	0.0	533.8	107	40-137	
Aroclor-1260	500	0.0	497.5	100	57-147	

	Aqueous	Soil/Sediment
LCS Recovery Limits (DKQP)	40-140	40-140

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

\$ Values outside of NJ DKQP limits

PCB MS/MSD ACCURACY REPORT

Lab ID: E17-05390-001					GC Column: DB-5/DB1701P					
Date Received: 06/29/2017					Sample wt/vol: 5.37g					
Date Extracted: 06/	29/2017				Ma	trix-Uni	ts: Solid	l-ug/Kg		
Date Analyzed: 07/05/2017 % Moisture: NA										
MS Data file: Y4	Y4363.D Dilution Factor: 1									
MSD Data file: Y42	364.D	Dilution Factor: 1								
	Conc.		Conc.	%Rec.		Conc.	%Rec.			
Compound	Add	Sample	MS	MS	#	MSD	MSD	# %RPD #	QC Limits	
Aroclor-1016	500	0.0	473 5	95		462 4	92	2	12-163/25	
Aroclor-1260	500	0.0	440.6	88		395.4	79	11	16-178/27	

	Aqueous	Soil/Sediment
MS/MSD Recovery Limits (DKQP)	30-150	30-150
MS/MSD RPD Limits (DKQP)	20	30

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

\$ Values outside of NJ DKQP limits

NC Not calculable

)

PCB METHOD BLANK SUMMARY

Lab File ID:	<u>Y4361.D</u>	Instrument ID:	<u>GC-Y</u>
Date Extracted:	06/29/2017	Matrix:	<u>SOIL</u>
Date Analyzed:	07/05/2017	Time Analyzed:	<u>11:51</u>

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS or LCSD, MS or MSD:

		Date	Time Analyzed	
Client ID	Lab Sample ID	Analyzed		
PCB	LCSS170629-14	07/05/2017	12:09	
PCB	E17-05390-001MS	07/05/2017	12:26	
PCB	E17-05390-001MSD	07/05/2017	12:44	
PCG-50-0	E17-05390-001	07/05/2017	13:01	
PCG-50-0	E17-05390-002	07/05/2017	13:18	
PCG-50-0	E17-05390-003	07/05/2017	13:36	
PCG-50-0	E17-05390-004	07/05/2017	13:53	
PCG-50-0	E17-05390-005	07/05/2017	14:10	
PCG-50-0	E17-05390-006	07/05/2017	14:28	
PCG-450-	E17-05391-001	07/05/2017	14:45	
PCG-450-	E17-05391-002	07/05/2017	15:03	
PCG-450-	E17-05391-003	07/05/2017	15:20	
PCG-450-	E17-05391-004	07/05/2017	15:37	
PCG-450-	E17-05391-005	07/05/2017	15:55	
PCG-450-	E17-05391-006	07/05/2017	16:12	
PCG-450-	E17-05391-007	07/05/2017	16:30	
PCG-450-	E17-05391-008	07/05/2017	16:47	
PCG-450-	E17-05391-009	07/05/2017	17:05	
PCG-450-	E17-05391-006DL	07/06/2017	09:54	

AROCLOR INITIAL CALIBRATION SUMMARY

Date Analyzed:

<u>06/16/2017</u>

Instrument ID:	<u>GC-Y</u>		
GC Column (1st):	<u>DB-5</u>		

Data File:

<u>Y3983.D</u> <u>Y3982.D</u> <u>Y3981.D</u> <u>Y3980.D</u> <u>Y3979.D</u>

		RT OF STANDARDS				MEAN	RT WI NDOW	
Compound	10	50	500	1000	2000	RT	FROM	то
Aroclor-1016	3.28	3.29	3.29	3.29	3.29	3.29	3.22	3.36
Aroclor-1016 {2}	4.13	4.13	4.13	4.13	4.13	4.13	4.06	4.20
Aroclor-1016 {3}	4.68	4.69	4.69	4.69	4.68	4.68	4.61	4.75
Aroclor-1016 {4}	5.19	5.20	5.19	5.19	5.19	5.19	5.12	5.26
Aroclor-1016 {5}	5.59	5.59	5.59	5.59	5.59	5.59	5.52	5.66
Aroclor-1221			2.17				2.10	2.24
Aroclor-1221 {2}			3.08				3.01	3.15
Aroclor-1221 {3}			3.21				3.14	3.28
Aroclor-1221 {4}			3.29				3.22	3.36
Aroclor-1221 {5}			3.89				3.82	3.96
Aroclor-1232			3.29				3.22	3.36
Aroclor-1232 {2}			4.13				4.06	4.20
Aroclor-1232 {3}			4.80				4.73	4.87
Aroclor-1232 {4}			5.40				5.33	5.47
Aroclor-1232 {5}			5.59				5.52	5.66
Aroclor-1242			4.13				4.06	4.20
Aroclor-1242 {2}			5.07				5.00	5.14
Aroclor-1242 {3}			5.40				5.33	5.47
Aroclor-1242 {4}			6.10				6.03	6.17
Aroclor-1242 {5}			6.37				6.30	6.44
Aroclor-1248			4.53				4.45	4.61
Aroclor-1248 {2}			5.08				5.00	5.16
Aroclor-1248 {3}			5.40				5.32	5.48
Aroclor-1248 {4}			6.10				6.02	6.18
Aroclor-1248 {5}			6.37				6.29	6.45
Aroclor-1254			6.49				6.41	6.57
Aroclor-1254 {2}			6.93				6.85	7.01
Aroclor-1254 {3}			7.10				7.01	/.19
Aroclor-1254 {4}			7.53				1.44	7.62
Aroclor-1254 {5}			8.39			0.00	8.30	8.48
Aroclor-1260	8.38	8.38	8.38	8.38	8.38	8.38	1.48	9.28
Aroclor-1260 {2}	9.06	9.06	9.06	9.06	9.06	9.06	8.16	9.96
Aroclor-1260 {3}	9.54	9.53	9.53	9.53	9.53	9.53	8.63	10.43
Aroclor-1260 {4}	10.02	10.02	10.02	10.02	10.02	10.02	9.12	10.92
Aroclor-1260 {5}	11.08	11.08	11.08	11.08	11.08	11.08	10.18	11.98
Date Analyzed:	<u>06/16/2017</u>			Instrument I GC Column	<u>GC-Y</u> <u>DB-5</u>			
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Data File:	<u>Y3983.D</u>	<u>Y3982.D</u>	<u>Y3981.D</u>	<u>Y3980.D</u>	<u>Y3979.D</u>			

		CALIBR	ATION FA	CTORS			
Compound	10	50	500	1000	2000	MEAN	%RSD
Aroclor-1016	574793	617153	685529	663944	649996	638283	6.79
Aroclor-1016 {2}	887952	823631	903128	884636	845133	868896	3.82
Aroclor-1016 {3}	982786	1179449	1250157	1196509	1175466	1156874	8.80
Aroclor-1016 {4}	582434	545539	591672	557494	548079	565044	3.69
Aroclor-1016 {5}	898231	900419	989620	958836	957415	940904	4.26
Aroclor-1221			128318				
Aroclor-1221 {2}			494149				
Aroclor-1221 {3}			310617				
Aroclor-1221 {4}			1023072				
Aroclor-1221 {5}			213565				
Aroclor-1232			691554				
Aroclor-1232 {2}			386085				
Aroclor-1232 {3}			364866				
Aroclor-1232 {4}			369844				
Aroclor-1232 {5}			504050				
Aroclor-1242			717678				
Aroclor-1242 {2}			476541				
Aroclor-1242 {3}			628417				
Aroclor-1242 {4}			1066741				
Aroclor-1242 {5}			842758				
Aroclor-1248			1497470				
Aroclor-1248 {2}			857932				
Aroclor-1248 {3}			1075252				
Aroclor-1248 {4}			1886522				
Aroclor-1248 {5}			1302700				
Aroclor-1254			2064723				
Aroclor-1254 {2}			1301576				
Aroclor-1254 {3}			2485702				
Aroclor-1254 {4}			2727557				
Aroclor-1254 {5}			2508808				
Aroclor-1260	2862815	2872101	3138931	3076464	3129115	3015885	4.56
Aroclor-1260 {2}	1395588	1301725	1407688	1411449	1352742	1373838	3.39
Aroclor-1260 {3}	3831401	3929630	4531643	4482311	4579617	4270920	8.42
Aroclor-1260 {4}	1927492	1849361	2106415	2105079	2159642	2029598	6.58
Aroclor-1260 {5}	1082275	899558	1087019	1098348	1095968	1052634	8.15
					Average %	RSD	5.85

Date Analyzed:

<u>06/16/2017</u>

Instrument ID:	<u>GC-Y</u>
GC Column (2nd):	DB-1701P

Data File:

<u>Y3983.C</u> <u>Y3982.C</u> <u>Y3981.C</u> <u>Y3980.C</u> <u>Y3979.C</u>

		RT C	DF STANE	ARDS		MEAN	RT WI NDOW	
Compound	10	50	500	1000	2000	RT	FROM	ТО
Aroclor-1016	3.74	3.74	3.75	3.75	3.75	3.75	3.68	3.82
Aroclor-1016 {2}	4.34	4.35	4.35	4.35	4.35	4.35	4.28	4.42
Aroclor-1016 {3}	5.10	5.10	5.10	5.10	5.10	5.10	5.03	5.17
Aroclor-1016 {4}	5.31	5.31	5.31	5.31	5.31	5.31	5.24	5.38
Aroclor-1016 {5}	5.48	5.48	5.48	5.48	5.48	5.48	5.41	5.55
Aroclor-1221			2.41				2.34	2.48
Aroclor-1221 {2}			3.42				3.35	3.49
Aroclor-1221 {3}			3.65				3.58	3.72
Aroclor-1221 {4}			3.75				3.68	3.82
Aroclor-1221 {5}			5.10				5.03	5.17
Aroclor-1232			3.65				3.58	3.72
Aroclor-1232 {2}			4.66				4.59	4.73
Aroclor-1232 {3}			5.10				5.03	5.17
Aroclor-1232 {4}			5.31				5.24	5.38
Aroclor-1232 {5}			6.08				6.01	6.15
Aroclor-1242			4.73				4.66	4.80
Aroclor-1242 {2}			5.48				5.41	5.55
Aroclor-1242 {3}			6.08				6.01	6.15
Aroclor-1242 {4}			6.23				6.16	6.30
Aroclor-1242 {5}			6.78				6.71	6.85
Aroclor-1248			5.10				5.02	5.18
Aroclor-1248 {2}			5.68				5.60	5.76
Aroclor-1248 {3}			6.08				6.00	6.16
Aroclor-1248 {4}			6.23				6.15	6.31
Aroclor-1248 {5}			6.58				6.50	6.66
Aroclor-1254			7.08				7.00	7.16
Aroclor-1254 {2}			7.66				7.58	7.74
Aroclor-1254 {3}			8.10				8.01	8.19
Aroclor-1254 {4}			8.28				8.19	8.37
Aroclor-1254 {5}			9.10				9.01	9.19
Aroclor-1260	7.85	7.85	7.85	7.85	7.85	7.85	6.95	8.75
Aroclor-1260 {2}	8.10	8.10	8.10	8.10	8.10	8.10	7.20	9.00
Aroclor-1260 {3}	9.70	9.70	9.70	9.70	9.70	9.70	8.80	10.60
Aroclor-1260 {4}	10.21	10.20	10.20	10.20	10.20	10.20	9.30	11.10
Aroclor-1260 {5}	10.80	10.79	10.79	10.79	10.79	10.79	9.89	11.69

Date Analyzed:	<u>06/16/2017</u>		Instrument ID: <u>GC-Y</u>			<u>GC-Y</u>	
				GC Column	(2nd):	<u>DB-1701P</u>	
Data File:	<u>Y3983.C</u>	<u>Y3982.C</u>	<u>Y3981.C</u>	<u>Y3980.C</u>	<u>Y3979.C</u>	·	
		CALIB	RATION FA	CTORS			
Compound	10	50	500	1000	2000	MEAN	%RSD
Aroclor-1016	489086	462974	441638	408786	397332	439963	8.61
Aroclor-1016 {2}	970843	952702	871963	835973	820448	890386	7.65
Aroclor-1016 {3}	2145454	2050432	1976078	1911170	1929579	2002543	4.81
Aroclor-1016 {4}	779242	978495	871169	825226	815964	854019	9.01
Aroclor-1016 {5}	667972	710343	663475	637878	638307	663595	4.46
Aroclor-1221			94396				
Aroclor-1221 {2}			284451				
Aroclor-1221 {3}			190658				
Aroclor-1221 {4}			647487				
Aroclor-1221 {5}			120049				
Aroclor-1232			131309				
Aroclor-1232 {2}			126332				
Aroclor-1232 {3}			852020				
Aroclor-1232 {4}			391947				
Aroclor-1232 {5}			405510				
Aroclor-1242			305513				
Aroclor-1242 {2}			535631				
Aroclor-1242 {3}			686097				
Aroclor-1242 {4}			581315				
Aroclor-1242 {5}			1151749				
Aroclor-1248			977401				
Aroclor-1248 {2}			1466918				
Aroclor-1248 {3}			1053808				
Aroclor-1248 {4}			973261				
Aroclor-1248 {5}			542146				
Aroclor-1254			1408042				
Aroclor-1254 {2}			1120344				
Aroclor-1254 {3}			745551				
Aroclor-1254 {4}			1137374				
Aroclor-1254 {5}			1718777				
Aroclor-1260	818516	844376	795171	768414	776474	800590	3.89
Aroclor-1260 {2}	1295423	1243249	1166349	1119263	1122015	1189260	6.53
Aroclor-1260 {3}	1201055	1143794	1145528	1118396	1179752	1157705	2.82
Aroclor-1260 {4}	2824762	2829523	2924476	2881824	2995235	2891164	2.46
Aroclor-1260 {5}	1942866	2009132	2070818	2021638	2089479	2026787	2.84
		••••••••••••••••••••••••••••••••••••••	<u></u>		Average %	6RSD	5.31

06/16/2017

					GC Colum	ın (1st):	<u>DB-5</u>	
Data File:	<u>Y3983.D</u>	<u>Y3982.D</u>	<u>Y3981.D</u>	<u>Y3980.D</u>	<u>¥3979.D</u>			
		RT	OF STAN		MEAN	RT WI	NDOW	
Compound	10	50	500	1000	2000	RT	FROM	ТО
Aroclor-1262			8.67				8.55	8.79
Aroclor-1262 {2}			9.53				9.41	9.65
Aroclor-1262 {3}			10.17				10.05	10.29
Aroclor-1262 {4}	1		10.25				10.13	10.37
Aroclor-1262 {5}			11.08				10.96	11.20
Aroclor-1268			10.17				10.05	10.29
Aroclor-1268 {2}	- i - · ·		10.25				10.13	10.37
Aroclor-1268 {3}			10.72				10.60	10.84
Aroclor-1268 {4}			10.85		<u> </u>		10.73	10.97
Aroclor-1268 {5}		1	11.68				11.56	11.80

GC Column (2nd): <u>DB-1701P</u>

Instrument ID:

<u>GC-Y</u>

Data File:

Date Analyzed:

<u>Y3983.C</u> <u>Y3982.C</u> <u>Y3981.C</u> <u>Y3980.C</u> <u>Y3979.C</u>

		RT (OF STANE	DARDS		MEAN	RT WI	NDOW
Compound	10	50	500	1000	2000	RT	FROM	ТО
Aroclor-1262			9.70				9.58	9.82
Aroclor-1262 {2}			10.20				10.08	10.32
Aroclor-1262 {3}			10.70				10.58	10.82
Aroclor-1262 {4}			10.79				10.67	10.91
Aroclor-1262 {5}			11.39				11.27	11.51
Aroclor-1268			10.70				10.58	10.82
Aroclor-1268 {2}			10.78				10.66	10.90
Aroclor-1268 {3}	[11.04				10.92	11.16
Aroclor-1268 {4}			11.83				11.71	11.95
Aroclor-1268 {5}			12.26				12.14	12.38

Date Analyzed:	<u>06/16/201</u>	06/16/2017 Instrument ID: GC Column (1st):			t ID: n (1st):	<u>GC-Y</u> <u>DB-5</u>					
Data File:	<u>Y3983.D</u>	<u>Y3982.D</u>	<u>Y3981.D</u>	<u>Y3980.D</u>	<u>¥3979.D</u>						
CALIBRATION FACTORS											
Compound	10	50	500	1000	2000	MEAN	%RSD				
Aroclor-1262			2812669								
Aroclor-1262 {2}			5584001								
Aroclor-1262 {3}			2305558								
Aroclor-1262 {4}			2590700								
Aroclor-1262 {5}			2076191								
Aroclor-1268			6316558								
Aroclor-1268 {2}			6892845								
Aroclor-1268 {3}			5738393								
Aroclor-1268 {4}			1443744								
Aroclor-1268 {5}			17140314								

GC Column (2nd): <u>DB-1701P</u>

Data File:

<u>Y3983.C</u> <u>Y3982.C</u> <u>Y3981.C</u>

<u>Y3980.C</u> <u>Y3979.C</u>

		CALIB	RATION FA	CTORS			
Compound	10	50	500	1000	2000	MEAN	%RSD
Aroclor-1262			1432566				
Aroclor-1262 {2}			3680107				
Aroclor-1262 {3}			1363490				
Aroclor-1262 {4}			2584717				
Aroclor-1262 {5}			498883				
Aroclor-1268			4131901				
Aroclor-1268 {2}			4097990				
Aroclor-1268 {3}			3507105				
Aroclor-1268 {4}			1418886				
Aroclor-1268 {5}			10817383				

Date/Time Analyzed:	<u>07/05/201</u>	7	Instrument ID:			<u>GC-Y</u>
Data File:	<u>Y4360.D</u>			GC Column (1	st):	<u>DB-5</u>
		RT WI	NDOW	-		
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.29	3.22	3.36	638283	692096	8.43
Aroclor-1016 {2}	4.13	4.06	4.20	868896	948993	9.22
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1270968	9.86
Aroclor-1016 {4}	5.20	5.12	5.26	565044	571085	1.07
Aroclor-1016 {5}	5.59	5.52	5.66	940904	977963	3.94
Aroclor-1260	8.39	7.48	9.28	3015885	2808104	6.89
Aroclor-1260 {2}	9.06	8.16	9.96	1373838	1214721	11.58
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	3484532	18.41
Aroclor-1260 {4}	10.02	9.12	10.92	2029598	1668759	17.78
Aroclor-1260 {5}	11.08	10.18	11.98	1052634	1032751	1.89
Data File:	<u>Y4360.C</u>			GC Column (2	and):	<u>DB-1701P</u>

		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.75	3.68	3.82	439963	463350	5.32
Aroclor-1016 {2}	4.35	4.28	4.42	890386	910464	2.25
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2075455	3.64
Aroclor-1016 {4}	5.31	5.24	5.38	854019	885141	3.64
Aroclor-1016 {5}	5.48	5.41	5.55	663595	677884	2.15
Aroclor-1260	7.85	6.95	8.75	800590	787204	1.67
Aroclor-1260 {2}	8.11	7.20	9.00	1189260	1120495	5.78
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1166295	0.74
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	2709786	6.27
Aroclor-1260 {5}	10.80	9.89	11.69	2026787	1941381	4.21

Date/Time Analyzed:	<u>07/05/201</u>	<u>7</u>		Instrument I	D:	<u>GC-Y</u>	
Data File:	<u>Y4380.D</u>	<u>Y4380.D</u>			st):	<u>DB-5</u>	
		RT WI	NDOW			Τ	
Compound	RT	FROM	ТО	Avg CF	CC CF	%D	
Aroclor-1016	3.29	3.22	3.36	638283	727917	14.04	
Aroclor-1016 {2}	4.13	4.06	4.20	868896	958782	10.34	
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1302893	12.62	
Aroclor-1016 {4}	5.20	5.12	5.26	565044	571396	1.12	
Aroclor-1016 {5}	5.60	5.52	5.66	940904	1016918	8.08	
Aroclor-1260	8.39	7.48	9.28	3015885	2947930	2.25	
Aroclor-1260 {2}	9.07	8.16	9.96	1373838	1266602	7.81	
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	3835912	10.19	
Aroclor-1260 {4}	10.02	9.12	10.92	2029598	1777119	12.44	
Aroclor-1260 {5}	11.08	10.18	11.98	1052634	987168	6.22	

Data File:

<u>Y4380.C</u>

GC Column (2nd): DB-1701P

		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.74	3.68	3.82	439963	490545	11.50
Aroclor-1016 {2}	4.35	4.28	4.42	890386	959359	7.75
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2220566	10.89
Aroclor-1016 {4}	5.31	5.24	5.38	854019	900849	5.48
Aroclor-1016 {5}	5.48	5.41	5.55	663595	704413	6.15
Aroclor-1260	7.85	6.95	8.75	800590	825064	3.06
Aroclor-1260 {2}	8.11	7.20	9.00	1189260	1172120	1.44
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1233580	6.55
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	3140139	8.61
Aroclor-1260 {5}	10.79	9.89	11.69	2026787	2312468	14.10

Date/Time Analyzed:	<u>07/06/201</u>	7		Instrument D	D:	<u>GC-Y</u>
Data File:	<u>Y4387.D</u>			GC Column (1	st):	<u>DB-5</u>
		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.29	3.22	3.36	638283	697812	9.33
Aroclor-1016 {2}	4.13	4.06	4.20	868896	914679	5.27
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1252220	8.24
Aroclor-1016 {4}	5.20	5.12	5.26	565044	575003	1.76
Aroclor-1016 {5}	5.60	5.52	5.66	940904	984227	4.60
Aroclor-1260	8.39	7.48	9.28	3015885	3014532	0.04
Aroclor-1260 {2}	9.07	8.16	9.96	1373838	1326911	3.42
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	4146792	2.91
Aroclor-1260 {4}	10.02	9.12	10.92	2029598	1891143	6.82
Aroclor-1260 {5}	11.09	10.18	11.98	1052634	882724	16.14

Data File:

<u>Y4387.C</u>

GC Column (2nd):

<u>DB-1701P</u>

		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.74	3.68	3.82	439963	446015	1.38
Aroclor-1016 {2}	4.35	4.28	4.42	890386	876322	1.58
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2019937	0.87
Aroclor-1016 {4}	5.31	5.24	5.38	854019	863644	1.13
Aroclor-1016 {5}	5.48	5.41	5.55	663595	665596	0.30
Aroclor-1260	7.85	6.95	8.75	800590	785210	1.92
Aroclor-1260 {2}	8.11	7.20	9.00	1189260	1126867	5.25
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1104632	4.58
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	2862296	1.00
Aroclor-1260 {5}	10.80	9.89	11.69	2026787	1987570	1.93

Date/Time Analyzed:	07/06/201	<u>7</u>		Instrument I	D:	<u>GC-Y</u>
Data File:	<u>Y4390.D</u>			GC Column (1	st):	<u>DB-5</u>
· ·		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.29	3.22	3.36	638283	683598	7.10
Aroclor-1016 {2}	4.13	4.06	4.20	868896	899651	3.54
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1236290	6.86
Aroclor-1016 {4}	5.20	5.12	5.26	565044	576870	2.09
Aroclor-1016 {5}	5.60	5.52	5.66	940904	981125	4.27
Aroclor-1260	8.39	7.48	9.28	3015885	2868209	4.90
Aroclor-1260 {2}	9.07	8.16	9.96	1373838	1253235	8.78
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	3905546	8.55
Aroclor-1260 {4}	10.03	9.12	10.92	2029598	1767656	12.91
Aroclor-1260 {5}	11.09	10.18	11.98	1052634	918447	12.75

Data File:

<u>Y4390.C</u>

GC Column (2nd):

<u>DB-1701P</u>

		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.74	3.68	3.82	439963	451151	2.54
Aroclor-1016 {2}	4.35	4.28	4.42	890386	889769	0.07
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2044008	2.07
Aroclor-1016 {4}	5.31	5.24	5.38	854019	880189	3.06
Aroclor-1016 {5}	5.48	5.41	5.55	663595	676596	1.96
Aroclor-1260	7.85	6.95	8.75	800590	799699	0.11
Aroclor-1260 {2}	8.10	7.20	9.00	1189260	1152448	3.10
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1119269	3.32
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	2898362	0.25
Aroclor-1260 {5}	10.79	9.89	11.69	2026787	2004228	1.11

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID:

GC-Y

Column: DB-5/DB-1701P

Surrogate RT from initial calibration : -- -

	TCMX 1	<u>2.82</u>	DCB 1	<u>12.18</u>	тсмх	2	<u>2.87</u>		DCB 2		<u>12.48</u>	
		Lab	Date	Time	тсмх	1	DCB 1		TCMX 2		DCB 2	
Client ID		Sample ID	Analyzed	Analyzed	RT	#	RT	#	RT	#	RT	#
PCB		BLKS170629-14	07/05/2017	11:51	2.82		12.18		2.87		12.48	
PCB		LCSS170629-14	07/05/2017	12:09	2.82		12.18		2.87		12.48	
PCB		E17-05390-001MS	07/05/2017	12:26	2.82		12.18		2.87		12.48	
PCB		E17-05390-001MSD	07/05/2017	12:44	2.82		12.18		2.87		12.48	
PCG-50-0		E17-05390-001	07/05/2017	13:01	2.82		12.18		2.87		12.49	
PCG-50-0		E17-05390-002	07/05/2017	13:18	2.82		12.18		2.87		12.49	
PCG-50-0		E17-05390-003	07/05/2017	13:36	2.82		12.18		2.87		12.49	
PCG-50-0		E17-05390-004	07/05/2017	13:53	2.82		12.18		2.87		12.48	
PCG-50-0		E17-05390-005	07/05/2017	14:10	2.82		12.18		2.87		12.52	
PCG-50-0		E17-05390-006	07/05/2017	14:28	2.82		12.18		2.87		12.60	Μ
PCG-450-		E17-05391-001	07/05/2017	14:45	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-002	07/05/2017	15:03	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-003	07/05/2017	15:20	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-004	07/05/2017	15:37	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-005	07/05/2017	15:55	2.82		12.18		2.87		12.49	
PCG-450-		E17-05391-006	07/05/2017	16:12	0.00	D	0.00	D	0.00	D	0.00	D
PCG-450-		E17-05391-007	07/05/2017	16:30	2.82		12.18		2.87		12.49	
PCG-450-		E17-05391-008	07/05/2017	16:47	2.82		12.17		2.87		12.48	
PCG-450-		E17-05391-009	07/05/2017	17:05	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-006DL	07/06/2017	09:54	0.00	D	0.00	D	0.00	D	0.00	D

Surrogate QC Limits TCMX = Tetrachloro-m-xylene **DCB** = Decachlorobiphenyl

 $(\pm 0.10 \text{ Minutes})$ $(\pm 0.10 \text{ Minutes})$

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogate diluted out

M Matrix interference

PCB SAMPLE DATA

Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4365.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 13:01 Operator : IB Sample : PCG-50-0,E17-05390-001,Xs,5.37g,0,20 Misc : 170629-14,06/29/17,06/29/17,1 ALS Vial : 6 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Ouant Time: Jul 05 15:22:10 2017 Ouant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : OLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 nq#2 System Monitoring Compounds 1) S TCMX2.822.876407.5E65097.6E6160.608192.311Spiked Amount200.000Recovery=80.30%96.16%2) S DCB12.1812.495891.7E65781.5E6148.916212.369Spiked Amount200.000Recovery=74.46%106.18% 212.369 # N.D. Target Compounds 0 0 N.D. Sum Aroclor-1016 0.000 Average Aroclor-1016 N.D. N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 N.D. Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1248 Average Aroclor-1248 6.50 7.08 118.0E6 108.5E6 57.169 77.029m#

 28)
 L7
 Aroclor-1254
 6.50
 7.08
 118.0E6
 108.5E6
 57.169
 77.029m#

 29)
 L7
 Aroclor-1254
 {2}
 6.96
 7.70
 141.2E6
 239.3E6
 108.511m
 213.613m#

 30)
 L7
 Aroclor-1254
 {3}
 7.10
 8.11
 359.0E6
 164.7E6
 144.430m
 220.892m#

 31)
 L7
 Aroclor-1254
 {4}
 7.52
 8.29
 261.1E6
 266.8E6
 95.745m
 234.610m#

 32)
 L7
 Aroclor-1254
 {5}
 8.39
 9.10
 231.5E6
 208.8E6
 92.285m
 121.484m#

 1111
 0E6
 988
 1E6
 498.141
 867.628

 1111.0E6 988.1E6 498.141 867.628 Sum Aroclor-1254 99.628 173.526 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1262 0 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4366.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 13:18 Operator : IB Sample : PCG-50-0,E17-05390-002,Xs,5.55g,0,20 Misc : 170629-14.06/29/17.06/29/17.1 ALS Vial : 7 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 13:48:35 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 ------System Monitoring Compounds 1) S TCMX2.822.876409.4E65323.5E6160.655200.831 #Spiked Amount200.000Recovery=80.33%100.42% Spiked Amount200.000Recovery=80.33%100.42%2) SDCB12.1812.496048.6E66782.8E6152.880m249.151 # Recovery = 76.44% 124.58% Spiked Amount 200.000 Target Compounds 0 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1016 0.000 Average Aroclor-1016 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 N.D. 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 N.D. 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1260 Average Aroclor-1260 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 ------

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.







Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4367.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 13:36 Operator : IB Sample : PCG-50-0,E17-05390-003,Xs,5.67g,0,20 Misc : 170629-14,06/29/17.06/29/17.1 ALS Vial : 8 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:23:53 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 -System Monitoring Compounds

 1) S TCMX
 2.82
 2.87
 6640.5E6
 5265.0E6
 166.448
 198.626

 Spiked Amount
 200.000
 Recovery
 =
 83.22%
 99.31%

 2) S DCB
 12.18
 12.49
 8440.9E6
 9028.2E6
 213.348
 331.630 #

 Spiked Amount
 200.000
 Recovery
 =
 106.67%
 165.82%

 Target Compounds N.D. N.D. 0.000 0.000 0 N.D. 0 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1242 0 Average Aroclor-1242 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1248 Average Aroclor-1248

 28)
 L7
 Aroclor-1254
 6.51
 7.09
 554.8E6
 251.0E6
 268.720m
 178.296 #

 29)
 L7
 Aroclor-1254
 {2}
 6.93
 7.70
 586.5E6
 605.2E6
 450.633m
 540.156m

 30)
 L7
 Aroclor-1254
 {3}
 7.11
 8.11
 1003.0E6
 468.0E6
 403.500m
 627.719m#

 31)
 L7
 Aroclor-1254
 {4}
 7.55
 0.00
 1068.7E6
 0
 391.805m
 N.D. d#

 32)
 L7
 Aroclor-1254
 {5}
 8.39
 9.10
 997.9E6
 884.0E6
 397.753m
 514.324m#

 Sum
 Aroclor-1254
 4
 4210.9E6
 2208.2E6
 1912.411
 1860.496

 Average Aroclor-1254 382.482 465.124 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1262 0.000 Average Aroclor-1262 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1268 0.000 Average Aroclor-1268 ------(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. E17-05390 0037







Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4368.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 13:53 Operator : IB Sample : PCG-50-0,E17-05390-004,Xs,5.80g,0,20 Misc : 170629-14,06/29/17,06/29/17,1 ALS Vial : 9 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:15:02 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #2 Phase: Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds Recovery = 87.15% 98.51% 12.48 5939.8E6 5828.0E6 150 1215 1) S TCMX 2.82 2.87 6953.4E6 5222.7E6 174.293

 1) S TCMX

 Spiked Amount
 200.000

 2) S DCB
 12.18
 12.48
 5939.8E6
 5828.0E6
 150.131m
 214.077m#

 2) S DCB
 200.000
 Recovery
 =
 75.07%
 107.04%

 Target Compounds N.D. 0 N.D. Sum Aroclor-1016 0 0.000 Average Aroclor-1016 N.D. 0 0 0.000 N.D. Sum Aroclor-1221 0.000 Average Aroclor-1221 N.D. N.D. 0 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 N.D. Sum Aroclor-1248 Average Aroclor-1248

 28)
 L7
 Aroclor-1254
 6.50
 7.08
 222.1E6
 158.7E6
 107.588
 112.727

 29)
 L7
 Aroclor-1254
 {2}
 6.94
 7.70
 205.5E6
 361.6E6
 157.893
 322.764 #

 30)
 L7
 Aroclor-1254
 {3}
 7.10
 8.10
 511.8E6
 249.9E6
 205.898
 335.192m#

 31)
 L7
 Aroclor-1254
 {4}
 7.54
 8.28
 809.9E6
 444.6E6
 296.925
 390.938m#

 32)
 L7
 Aroclor-1254
 {5}
 8.39
 9.10
 722.9E6
 397.5E6
 288.142m
 231.292m

 6.50 7.08 222.1E6 158.7E6 107.588 112.727 2472.2E6 1612.4E6 1056.446 1392.913 Sum Aroclor-1254 211.289 278.583 Average Aroclor-1254 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1260 0.000 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 -----(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. E17-05390 0039 YPCB0616.M Thu Jul 06 12:03:47 2017 GC Y





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4369.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 14:10 Operator : IB Sample : PCG-50-0,E17-05390-005,Xs,5.26g,0,20 Misc : 170629-14,06/29/17,06/29/17,20 ALS Vial : 10 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:25:39 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : OLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #2 Phase: Signal #2 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds System Montcoring compounds1) S TCMX2.822.87270.4E6223.9E66.7778.448Spiked Amount200.000Recovery=3.39%4.22%2) S DCB12.1812.521280.1E61117.3E632.355m41.040m#Spiked Amount200.000Recovery=16.18%20.52% Target Compounds 0 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1268 0 Average Aroclor-1268 ------

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

YPCB0616.M Thu Jul 06 12:03:50 2017 GC_Y





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4370.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 14:28 Operator : IB Sample: PCG-50-0,E17-05390-006,Xs,5.46g,0,20Misc: 170629-14,06/29/17,06/29/17,20 ALS Vial : 11 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:26:48 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : OLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds 1) S TCMX2.822.87422.0E6252.2E610.5779.513Spiked Amount200.000Recovery=5.29%4.76%2) S DCB12.1812.60512.2E61915.0E612.946m70.345m#Spiked Amount200.000Recovery=6.47%35.17% Target Compounds 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1016 0.000 Average Aroclor-1016 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.00 0 0 Sum Aroclor-1242 0.000 Average Aroclor-1242 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1248 0.000 Average Aroclor-1248 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1254 0.000 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. 0.000 N.D. 0 Sum Aroclor-1262 0.000 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 -----

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.





Page: 2

INTEGRATED ANALYTICAL LABORATORIES

PCB's

Lab ID: BLKS170629-14 Client ID: PCB Date Received: NA Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4361.D

GC Column: DB-5/DB1701P Sample wt/vol: 5g Matrix-Units: Soil-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.040	0.016
Aroclor-1221	ND		0.040	0.016
Aroclor-1232	ND		0.040	0.016
Aroclor-1242	ND		0.040	0.016
Aroclor-1248	ND		0.040	0.016
Aroclor-1254	ND		0.040	0.016
Aroclor-1260	ND		0.040	0.016
Aroclor-1262	ND		0.040	0.016
Aroclor-1268	ND		0.040	0.016
PCBs	ND		0.040	0.016
D Dilution Performed			B Compound de	tected in Blank
J Value Less than RL & greater than MDL			C Common labo	ratory contamination

E --- Exceeds upper level of Calibration curve

Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4361.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 11:51 Operator : IB Sample : PCB, BLKS170629-14, S, 5g, 0, 20 Misc : 170629-14, 06/29/17, NA, 1 ALS Vial : 2 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 13:43:08 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 ------System Monitoring Compounds 1) S TCMX2.822.877551.8E64969.5E6189.291187.478Spiked Amount200.000Recovery=94.65%93.74%2) S DCB12.1812.485022.9E64592.4E6126.957168.693#Spiked Amount200.000Recovery=63.48%84.35%Target Compounds N.D. 0.000 0 N.D. Sum Aroclor-1016 0 0.000 Average Aroclor-1016 N.D. 0.000 0 0 N.D. Sum Aroclor-1221 0.000 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 0.000 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 0.000 Average Aroclor-1242 N.D. 0.000 0 N.D. 0 Sum Aroclor-1248 0.000 Average Aroclor-1248 N.D. 0.000 0 0 N.D. Sum Aroclor-1254 0.000 Average Aroclor-1254 0 N.D. 0.000 N.D. 0 Sum Aroclor-1260 0.000 Average Aroclor-1260 0 N.D. 0.000 N.D. 0 Sum Aroclor-1262 0.000 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.





SAMPLE TRACKING

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inte 273 Ran	
AL	The share of the second of the
	Interested Archite

nahytical Labs Road

Chain of Custody Record

Contact Us: 973-361-4252 Fax: 973-989-5288 Web: www.iaionline.com

Customer Information Customer Information Figure Tracif Nation Address: Some Set Uest Shore Tracif Address: Some Set Uest State Set Set Set Set State Set Set Set State Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set Set <		Charge A 24 hr - 75% 48 hr - 55% 96 hr - 35% 5 day - 25% 6-3 day - 10% mark if pre-approve and drote needed my if pre-approve AU EPH-CAO NJ EPH-CAO	Delive NJ, CT, PA AK Reduced Keduced Event Iurn-Around Tr Fuin Regulatory Ind A aweek A aweek A aweek Catagory 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	erables ASP Category ASP Category B. ASP Category and ASP Category ASP Category	EDDs EDDs NJ SRP NVSDEC EQuIS I ala approved custom i No EDD REQ'D Reg Reg Reg Reg Reg Reg Reg Reg Reg Reg	Concentrations Expected: Low ME High These samples have been previously analyzed by IAL D VES MON Gulatory Requirement Mew York NO D AWOS (TOGS Table 1) GWEL (TOGS Table 5) CWEL (TOGS Table 5) Part 375-6.8(b) - Restricted Part 375-6.8(b) - Restricted Required) OTHER Reg. Req. (specify)	Row
Fruithment Health Trucat Referent To: 657 Wert Shone Trail Address: SOMO Forte NT 073739.507 Attn: Particle NT 07671 Attn: Annager: Charle I be Attnen Attn: Annager: Charle I be Attnen Attn: Anne: Casele Attrinoite Relation (State): Attn: Name: Casele Attrinoite To same as above Attn: Attri Pols Moder #: Pols Mane: Congression (State): Attri Mane: Congression (State): Attri Marine: Congression (State): Attri Attri Pols Marine: Congression (State): Attrin Attrin Bending Attrin Bending Attrin Bending		24 hr - 100% 48 hr - 75% 5 day - 25% 5 day - 25% 6 day - 10% (10 bus ushidate needed <u>miy</u> if pre-approve and CODY: St NJ EPH-DRC	NJ, CT, PA Results Only LX Reduced Regulatory Iurn-Around T regulatory Iurn-Around T rest days) Vepta a)***********************************	NY ASP Category ASP Category an ASP Category ASP Cate	Image: Number of the second	Low High Epb These samples have been previously analyzed by IAL D These samples have been previously analyzed by IAL D These samples have been been previously analyzed by IAL D These samples have been been previously analyzed by IAL D These samples have been been previously analyzed by IAL D These samples have been the been been previously analyzed by IAL D AwoS (TOGS Table 1) CWEL (TOGS Table 5) Immediate the been been been been been been been be	And
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e: Container	Type (use code)	A				091	
se print legibly and fill out $\begin{pmatrix} 1 = None \\ 2 = Flexic \\ 3 = FNO3 \\ 3 = FNO3 \\ C = Vial \\ C = Vial \\ 0 = Via $	Requirements &	Comments: Ca	ill & Hoffin	her 973-617.	-1343 w/ Questin	in sper 774	
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EXECUTING THIS COC, DAC Counter E CLIENT HAS READ AND Client Counter C CLIENT HAS READ AND CLIENT COUNTER					·		
S TERMS & CONDITIONS							
IAL Rev 2/2014 Cartification IDs. T	TNI (TNI01284): CT (P	H-0699)- N.J (14751): NY (11402): PA (68-0	00773).			



PROJECT INFORMATION

RUSH

E17-05390: CASALE/PETRO GARWOOD

To: Charles Hoffman

Environmental Health Investigations, Inc. Fax: EMail: choffman@ehi-inc.com

Report ToBill ToEnvironmental Health Investigations, Inc.Environmental Health Investigations, Inc.655 West Shore Trail655 West Shore TrailSparta, NJ 07871Sparta, NJ 07871Attn: Charles HoffmanAttn: Tracy Brucato

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due	
Reduced		Jun 29, 2017 @ 12:30	NA	Jul 06, 2017	Jul 24, 2017 *	
	* Any Condition	al or Hold status will delay final hav	dcopy report sent	date		

Diskette Req. Not Required

<u>Lab ID</u>	Client Sample ID	<u>Depth</u>	<u>Sampling Time</u>	<u>Matrix</u>	<u>Unit</u> <u>Field pH/Temp</u>
05390-00	1 PCG-50-062917-1	NA	06/29/17@11:00	Solid r	mg/Kg (ppm)
05390-00	2 PCG-50-062917-2		36/29/17@11:00	Solid	ng/Kg (ppm)
05390-00	3 PCG-50-062917-3	NA	06/29/17@11:00	Solid r	mg/Kg (ppm)
05390-00	4 PCG-50-062917-4	NAL AN	06/29/17@11:00	Solid	mg/Kg (ppm)
05390-00	5 PCG-50-062917-5	NA	06/29/17@11:00	Solid r	mg/Kg (ppm)
05390-00	6 PCG-50-062917-6	t des NA stati	06/29/17@11:00	Solid I I I I I I I	mg/Kg (ppm)
Sample #	Test	<u>Status</u>	<u>QA Method</u>	<u>TAT</u>	Holding Time Expires
<u>Sample #</u> 001	<u>Test</u> TCL PCB	<u>Status</u> Analyze	<u>OA Method</u> 8082A	<u>TAT</u> RUSH 72 HRS	Holding Time Expires 6/29/2018
Sample # 001 Attr 062 #4	<u>Test</u> TCL PCB ITCL PCCEIAL	<u>Status</u> Analyze Analyze	<u>QA Method</u> 8082A	<u>TAT</u> RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018
Sample # 001 Attr 062 Fe 003	Test TCL PCB • TGB PCB TCL PCB	<u>Status</u> Analyze Analyze Analyze	<u>OA Method</u> 8082A 8082A 8082A	<u>TAT</u> RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018
Sample # 001 Attr 062 003 004	Test TCL PCB FCIL PCB TCL PCB TCL PCB	<u>Status</u> Analyze Analyze Analyze Analyze	<u>OA Method</u> 8082A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018
Sample # 001 Attr002ta 003 004 005	Test TCL PCB FCB FCCB AND	Status Analyze Analyze Analyze Analyze Analyze Analyze	<u>QA Method</u> 8082A 5197A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018

Project Notes:

43

NOTE 1 taken by kfalconer on 06/29/2017 04:16

PER COC INSTRUCTION: USE EXTRACTION METHOD 3500B/3540C OR 3500B/3550B

Allalyzo

NOTE 2 taken by kfalconer on 06/29/2017 04:22

EMAIL REPORTS TO:

ICLICD

CHOFFMAN@EHI-INC.COM;BKERBEL@EHI-INC.OM;JPVONDOEHREN@EHI-INC.COM

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INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: E 17 05390	CLIENT: EHT
COOLER TEMPERATURE: 2° - 6°C:	<pre>✓ (See Chain of Custody) Comments</pre>
KEY ✓ = YES/NA ≯ = NO	VOA received: Encore IGW - Methanol (check one) Terra Core No Preservative
 ✓ Bottles Intact ✓ no-Missing Bottles ✓ no-Extra Bottles 	
 Sufficient Sample Volume no-headspace/bubbles in VOs Labels intact/correct pH Check (exclude VOs)¹ Correct bottles/preservative Sufficient Holding/Prep Time¹ Multiphasic Sample Sample to be Subcontracted Chain of Custody is Clear ¹ All samples with "Analyze Immediately" holding times w the following tests: pH, Temperature, Free Residual Child ADDITIONAL COMMENTS: <u>100</u> 	ill be analyzed by this laboratory past the holding time. This includes but is not limited to orine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.
SAMPLE(S) VERIFIED BY: INITIA CORRECTIVE ACTION REQUIRE	D: YES SEE BELOW) DATE 0/24/17 NO
If COC is NOT clear, <u>STOP</u> until you CLIENT NOTIFIED: YES PROJECT CONTACT: SUBCONTRACTED LAB: DATE SHIPPED: ADDITIONAL COMMENTS:	get client to authorize/clarify work. Date/ Time: NO
VERIFIED/TAKEN BY: INITIA	ац Ку Е17-05390 <u>(0.0°51'17</u>

BULK SAMPLE DATA FORM

PS 20F2

ENVIRONMENTAL HEALTH INVESTIGATIONS, INC. 655 WEST SHORE TRAIL SPARTA, NJ 07871 PHONE: (973) 729-5649 FAX: (973) 729-5649

Client:	Ec	of Science	es			
Location:	Case	le Petro (n acuao	o Proper	4- Garu	0000 NJ
Date Colled	cted:	6/29/17		·	/	

Project #: 0.215- 6923

Collected By: KN CA CP

Sampl	e #	Type of Material	Location	Analysis Required PLM Only	Analysis Required NOB
PCG- 06.	50 2917 -1	Gavare Door Coulk-Greg	Casale. 50 Center ST		
	- 2	Window Courtk Tan	Casale - 50 Center ST		
	- 3	Window Glazing White	Casale-50 Conter ST		
	- 4	Window Glazing Dink	Casale- 50 Conter 5T		
	-5	Floor TAR Assor. 4 WOOD Block Floor	Casale - 50 Ponter ST EGT Lone Open Aren		
	-6	Water Proof Cooting	Casale 50 Center ST		

Lat	boratory Custod	y Chron	nicle		
IAL Case No.	Client	Environme	ental Health Inv	vestigations, Inc.	
E17-03390	Project	CASALE/	PETRO GARV	VOOD	
	Received On	<u>6/29/2017</u>	<u>@12:30</u>		
Department: GC		<u>Prep. Date</u>	<u>Analyst</u>	<u>Analysis Date</u>	<u>Analyst</u>
TCL PCB	05390-001 Solid	6/30/17	Archimede	7/ 6/17	Iwona
	-002 "	6/29/17	Archimede	7/ 6/17	Iwona
	-003 "	6/29/17	Archimede	7/ 6/17	Iwona
	-004 "	6/29/17	Archimede	7/ 6/17	Iwona
	-005: 200	6/29/17	Archimede	· · 7/ 6/17 · · · ·	· Iwona
 If a provide the state of the s	-006 "	6/29/17	Archimede	7/ 6/17	Iwona

Page IE1,7-05390 0053 Jul 06, 2017@04:13

Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288



ANALYTICAL DATA REPORT

Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871

Project Name: CASALE/PETRO GARWOOD IAL Case Number: E17-05391

These data have been reviewed and accepted by:

michan

Michael H. Lefth, Ph.D. Laboratory Director

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

273 Franklin Road Randolph, NJ 07869 Phone: 973 361 4252 Fax: 973 989 5288



IAL is a NELAP accredited lab (TNI01284) and maintains certification in Connecticut (PH-0699), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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This report was finalized on July 07, 2017

	Sample Summary	
IAL Case No.	Client Environmental He	alth Investigations, Inc.
E17-05391	Project <u>CASALE/PETRO</u>	GARWOOD
	Received On <u>6/29/2017@13:00</u>	
<u>Client Sample ID</u>	Depth Top/Bottom Sampling Til	<u>me Matrix Co</u>

n/a

n/a

n/a

n/a

n/a

n/a

n/a

n/a

PCG-450-062917-2

PCG-450-062917-3

PCG-450-062917-4

PCG-450-062917-5

PCG-450-062917-6

PCG-450-062917-8

PCG-450-062917-9

05391-007 PCG-450-062917-7

05391-002

05391-003

05391-004

05391-005

05391-006

05391-008

05391-009

Solid

Solid

Solid

Solid

6/29/2017@11:00 Solid

Solid

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Page 1 E1 7 - 05391 0001 Jul 06, 2017 @ 04:22 Integrated Analytical Labs ~ 273 Franklin Road, Randolph, NJ 07869 ~ (973) 361-4252 ~ Fax (973) 989-5288

INTEGRATED ANALYTICAL LABORATORIES, LLC.

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

- **<u>B</u>** Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.
- C Indicates analyte is a common laboratory contaminant.
- **D** Indicates analyte was reported from diluted analysis.
- <u>E</u> Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.
- <u>J</u> Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.
- N Presumptive evidence of a compound from the use of GC/MS library search.
- X Indicates samples analyzed for total and dissolved metals differ at ≤20% RPD.
- Z Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

- **<u>RL</u>** Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.
- MDL Method Detection Limit as determined according to 40CFR Part 136 Appendix B.
- PQL Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.
 - ND Indicates analyte was analyzed for but not detected above the MDL.
 - **DF** Dilution Factor
- LCS Laboratory Control Sample
- LCSD Laboratory Control Sample Duplicate
 - MS Matrix Spike
- MSD Matrix Spike Duplicate
- **<u>DUP</u>** Duplicate
SAMPLE DELIVERY GROUP CASE NARRATIVE (Conformance / Non-Conformance Summary)

SAMPLE DELIVERY GROUP CASE NARRATIVE

SDG#: E17-05391

Integrated Analytical Laboratories, LLC. received nine (9) samples** from Environmental Health Investigations, Inc. (IAL SDG**# E17-05391**, Project: CASALE/PETRO GARWOOD) on June 29, 2017 for the analysis of :

(9) TCL PCB

**Number of samples listed above may be greater than what is listed on the chain of custody. Any samples that require in-house filtration or splitting will be counted as separate samples.

Samples were received in good condition with documentation in order. Cooler temperature was acceptable at $4 \pm 2^{\circ}C$

PCB By 8082A		B	atch: 170629-14	Matrix: Solid					
QC	Calibration curve met QC criteria.								
	- Surrogate percent record for #006. NJDEP DKQF	very did not mee criteria not me	et QC criteria due to high t.	concentration of the target compound					
	- Method blank met QC o	riteria.							
	- LCS Percent Recovery	S Percent Recovery met QC criteria.							
	- RPD between MS/MSD	RPD between MS/MSD met QC criteria.							
	- MS/MSD Percent Recovery met QC criteria.								
	- The following samples 006, 007, 008, 009.	o using method 3660B to	remove sulfur: 001, 002, 003, 004, 005,						
E17-05391	391 - All samples were extracted within holding time.								
	- All samples were analyz	zed within holdir	ng time.						
	- Retention Time Shift me	et QC criteria.							
	Dilution Summary:								
	Sample ID	DF(s)	Dilution For						
	E17-05391-001	5	Matrix Interference.						
	E17-05391-002	1	NA						
	E17-05391-003	10	Matrix Interference.						
	E17-05391-004	5	Matrix Interference.						
	E17-05391-005	10	Matrix Interference.						
	E17-05391-006	2000;20000	Target compound(s).						
	E17-05391-007	1	NA						
	E17-05391-008	40	Matrix Interference.						
	E17-05391-009	10	Matrix Interference.						

A review of the QA/QC measures for the analysis of the sample(s) contained in this report has been performed by:

Reviewed by

7/6/2017 Date

DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name: Integrated Analytical Laboratories Client: Environmental Health Investigations, Inc. Project Location: CASALE/PETRO GARWOOD IAL Project #: E17-05391 IAL Sample ID(s): E17-05391-001 ~ -009 Sampling Date(s): 6/29/2017

List of DKQP Method Used:

TCL PCB by 8082A

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information is provided in the case narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Data of Known Quality."

X
X
x

RESULTS SUMMARY REPORT

SUMMARY REPORT

Client: Environmental Health Investigations, Inc. Project: CASALE/PETRO GARWOOD								
		La	o Case No.:	E17-0539	1			
Lab ID:	0539	1-001	0539	91-002	0	5391-003	053	91-004
Client ID:	PCG-450	-062917-1	PCG-45	0-062917-2	PCG-	450-062917-3	PCG-45	0-062917-4
Matrix:	So	lid	S	olid		Solid	S	Solid
Sampled Date	6/29	9/17	6/2	29/17		6/29/17	6/	29/17
PARAMETER(Units)	Conc (<u>MDL</u>	Conc	Q MDL	Conc	Q MDL	Conc (2 MDL
PCB's (Units)	(mg/	/Kg)	(<i>m</i> g	g/Kg)		(mg/Kg)	(m	ıg/Kg)
Aroclor-1016	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1221	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1232	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1242	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1248	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1254	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1260	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1262	ND	0.076	ND	0.015	ND	0.143	ND	0.077
Aroclor-1268	ND	0.076	0.768	0.015	ND	0.143	ND	0.077
PCBs	ND	0.076	0.768	0.015	5 ND	0.143	ND	0.077
Lab ID:	0539	1-005	0539	91-006	0	5391-007	053	91-008
Client ID:	PCG-450	-062917-5	PCG-45	0-062917-0	6 PCG-	450-062917-7	PCG-45	50-062917-8
Matrix:	So	lid	S	olid		Solid		Solid
Sampled Date	6/2	9/17	6/2	29/17	0	6/29/17	6/	29/17
PARAMETER(Units)	Conc (<u> MDL</u>	Conc	<u>Q</u> MDL	. Conc	Q MDL	Conc (
PCB's (Units)	(mg	/Kg)	(<i>m</i> į	g/Kg)		(mg/Kg)	(n	ıg/Kg)
Aroclor-1016	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1221	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1232	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1242	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1248	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1254	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1260	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1262	ND	0.154	ND	28.5	ND	0.014	ND	0.568
Aroclor-1268	ND	0.154	26700	D 285	ND	0.014	ND	0.568
PCBs	ND	0.154	26700	D 285	ND	0.014	ND	0.568
Lab ID:	0539	1-009						
Client ID:	PCG-450	-062917-9						
Matrix:	So	olid						
Sampled Date PARAMETER(Units)	6/2 Conc (9/17 Q MDL						
PCB's (Units)	(mg	/Kg)						
Aroclor-1016	ND	0.143						
Aroclor-1221	ND	0.143						
Aroclor-1232	ND	0.143						
Aroclor-1242	ND	0.143						
Aroclor-1248	ND	0.143						
Aroclor-1254	ND	0.143						
Aroclor-1260	ND	0.143						
Aroclor-1262	ND	0.143						
Aroclor-1268	ND	0.143						
PCBs	ND	0.143						
ND = Analyzed for but Not De	tected at the	MDL	-					

D = The compound was reported from the Diluted analysis

ANALYTICAL RESULTS

PCB's

Lab ID: E17-05391-001 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4371.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.30g Matrix-Units: Solid-mg/Kg Dilution Factor: 5 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.189	0.076
Aroclor-1221	ND		0.189	0.076
Aroclor-1232	ND		0.189	0.076
Aroclor-1242	ND		0.189	0.076
Aroclor-1248	ND		0.189	0.076
Aroclor-1254	ND		0.189	0.076
Aroclor-1260	ND		0.189	0.076
Aroclor-1262	ND		0.189	0.076
Aroclor-1268	ND		0.189	0.076
PCBs	ND		0.189	0.076
D Dilution Performed			B Compound de	tected in Blank
J Value Less than RL & greater than MDL			C Common labo	ratory contamination

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-002 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4372.D

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GC Column: DB-5/DB1701P Sample wt/vol: 5.31g Matrix-Units: Solid-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL	
Aroclor-1016	ND		0.038	0.015	
Aroclor-1221	ND		0.038	0.015	
Aroclor-1232	ND		0.038	0.015	
Aroclor-1242	ND		0.038	0.015	
Aroclor-1248	ND		0.038	0.015	
Aroclor-1254	ND		0.038	0.015	
Aroclor-1260	ND		0.038	0.015	
Aroclor-1262	ND		0.038	0.015	
Aroclor-1268	0.768		0.038	0.015	
PCBs	0.768		0.038	0.015	
D Dilution Performed	B Compound detected in Blank				

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

C --- Common laboratory contamination

PCB's

Lab ID: E17-05391-003 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4373.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.58g Matrix-Units: Solid-mg/Kg Dilution Factor: 10 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.358	0.143
Aroclor-1221	ND		0.358	0.143
Aroclor-1232	ND		0.358	0.143
Aroclor-1242	ND		0.358	0.143
Aroclor-1248	ND		0.358	0.143
Aroclor-1254	ND		0.358	0.143
Aroclor-1260	ND		0.358	0.143
Aroclor-1262	ND		0.358	0.143
Aroclor-1268	ND		0.358	0.143
PCBs	ND		0.358	0.143
		B Compound detected in Blank		
L Value Less than RL & greater than MDL			C Common labo	ratory contamination

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-004 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4374.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.23g Matrix-Units: Solid-mg/Kg Dilution Factor: 5 % Moisture: NA

Compound	Concentration	Q	RL	MDL	
Aroclor-1016	ND		0.191	0.077	
Aroclor-1221	ND		0.191	0.077	
Aroclor-1232	ND		0.191	0.077	
Aroclor-1242	ND		0.191	0.077	
Aroclor-1248	ND		0.191	0.077	
Aroclor-1254	ND		0.191	0.077	
Aroclor-1260	ND		0.191	0.077	
Aroclor-1262	ND		0.191	0.077	
Aroclor-1268	ND		0.191	0.077	
PCBs	ND		0.191	0.077	
D Dilution Performed	B Compound detected in Blank				

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

C --- Common laboratory contamination

PCB's

Lab ID: E17-05391-005 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4375.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.20g Matrix-Units: Solid-mg/Kg Dilution Factor: 10 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.385	0.154
Aroclor-1221	ND		0.385	0.154
Aroclor-1232	ND		0.385	0.154
Aroclor-1242	ND		0.385	0.154
Aroclor-1248	ND		0.385	0.154
Aroclor-1254	ND		0.385	0.154
Aroclor-1260	ND		0.385	0.154
Aroclor-1262	ND		0.385	0.154
Aroclor-1268	ND		0.385	0.154
PCBs	ND		0.385	0.154
D Dilution Performed			B Compound de C Common labo	tected in Blank ratory contamination
J Value Less man ne d greater man mee			-	•

E ---- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-006 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4376.D GC Column: DB-5/DB1701P Sample wt/vol: 5.62g Matrix-Units: Solid-mg/Kg Dilution Factor: 2000 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		71.2	28.5
Aroclor-1221	ND		71.2	28.5
Aroclor-1232	ND		71.2	28.5
Aroclor-1242	ND		71.2	28.5
Aroclor-1248	ND		71.2	28.5
Aroclor-1254	ND		71.2	28.5
Aroclor-1260	ND		71.2	28.5
Aroclor-1262	ND		71.2	28.5
Aroclor-1268	23700	E	71.2	28.5
PCBs	23700	Е	71.2	28.5

D ---- Dilution Performed

J --- Value Less than RL & greater than MDL

B --- Compound detected in Blank

C --- Common laboratory contamination

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-006DL Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/06/2017 Data file: Y4389.D GC Column: DB-5/DB1701P Sample wt/vol: 5.62g Matrix-Units: Solid-mg/Kg Dilution Factor: 20000 % Moisture: NA

Compound	Concentration	Q	RL	MDL	
Aroclor-1016	ND		712	285	
Aroclor-1221	ND		712	285	
Aroclor-1232	ND		712	285	
Aroclor-1242	ND		712	285	
Aroclor-1248	ND		712	285	
Aroclor-1254	ND		712	285	
Aroclor-1260	ND		712	285	
Aroclor-1262	ND		712	285	
Aroclor-1268	26700	D	712	285	
PCBs	26700	D	712	285	

D --- Dilution Performed

B --- Compound detected in Blank

C --- Common laboratory contamination

J ---- Value Less than RL & greater than MDL E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-007 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4377.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.73g Matrix-Units: Solid-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.035	0.014
Aroclor-1221	ND		0.035	0.014
Aroclor-1232	ND		0.035	0.014
Aroclor-1242	ND		0.035	0.014
Aroclor-1248	ND		0.035	0.014
Aroclor-1254	ND		0.035	0.014
Aroclor-1260	ND		0.035	0.014
Aroclor-1262	ND		0.035	0.014
Aroclor-1268	ND		0.035	0.014
PCBs	ND		0.035	0.014
D Dilution Performed		B Compound detected in Blank		
L Value Less than RL & greater than MDI			C Common labo	ratory contamination

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-008 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4378.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.63g Matrix-Units: Solid-mg/Kg Dilution Factor: 40 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		1.42	0.568
Aroclor-1221	ND		1.42	0.568
Aroclor-1232	ND		1.42	0.568
Aroclor-1242	ND		1.42	0.568
Aroclor-1248	ND		1.42	0.568
Aroclor-1254	ND		1.42	0.568
Aroclor-1260	ND		1.42	0.568
Aroclor-1262	ND		1.42	0.568
Aroclor-1268	ND		1.42	0.568
PCBs	ND		1.42	0.568
D Dilution Performed		B Compound detected in Blank		
LValue Less than RL & greater than MDI			C Common labo	pratory contamination

J --- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB's

Lab ID: E17-05391-009 Client ID: PCG-450-Date Received: 06/29/2017 Date Extracted: 06/30/2017 Date Analyzed: 07/05/2017 Data file: Y4379.D

GC Column: DB-5/DB1701P Sample wt/vol: 5.58g Matrix-Units: Solid-mg/Kg Dilution Factor: 10 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.358	0.143
Aroclor-1221	ND		0.358	0.143
Aroclor-1232	ND		0.358	0.143
Aroclor-1242	ND		0.358	0.143
Aroclor-1248	ND		0.358	0.143
Aroclor-1254	ND		0.358	0.143
Aroclor-1260	ND		0.358	0.143
Aroclor-1262	ND		0.358	0.143
Aroclor-1268	ND		0.358	0.143
PCBs	ND		0.358	0.143
D Dilution Performed			B Compound de	tected in Blank
L Value Less than RL & greater than MDL			C Common labo	ratory contamination

J ---- Value Less than RL & greater than MDL

E --- Exceeds upper level of Calibration curve

PCB DATA

PCB QC SUMMARY

PCB SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed:

07/05/2017

	Lab		TCMX 1	DCB 1		TCMX 2		DCB 2	
Client ID	Sample ID	Matrix	% rec #	% rec	#	% rec	4	% rec	#
РСВ	BLKS170629-14	SOIL	95	64		94		84	
PCB	LCSS170629-14	SOIL	97	67		95		107	
РСВ	E17-05390-001MS	SOLID	73	57		88		91	
РСВ	E17-05390-001MS	SOLID	74	67		88		88	
PCG-50-0	E17-05390-001	SOLID	80	75		96		106	
PCG-50-0	E17-05390-002	SOLID	80	76		100		125	
PCG-50-0	E17-05390-003	SOLID	83	107		99		166	
PCG-50-0	E17-05390-004	SOLID	87	75		99		107	
PCG-50-0	E17-05390-005	SOLID	68	324	Μ	84		410	Μ
PCG-50-0	E17-05390-006	SOLID	106	130		96		704	Μ
PCG-450-	E17-05391-001	SOLID	93	64		90		73	
PCG-450-	E17-05391-002	SOLID	84	62		98		117	
PCG-450-	E17-05391-003	SOLID	91	95		93		89	
PCG-450-	E17-05391-004	SOLID	92	61		99		96	
PCG-450-	E17-05391-005	SOLID	95	64		93		112	
PCG-450-	E17-05391-006	SOLID	0 E	0	D	0	D	0	D
PCG-450-	E17-05391-007	SOLID	84	67		97		115	
PCG-450-	E17-05391-008	SOLID	80	108		84		132	
PCG-450-	E17-05391-009	SOLID	98	82		100		127	
PCG-450-	E17-05391-006DL	SOLID	0 [) 0	D	0	D	0	D

Surrogate QC Limits	<u>Soil</u>	<u>Aqueous/Leachate</u>
TCMX = Tetrachloro-m-xylene	25-162	52-131
DCB = Decachlorobiphenyl	24-172	58-149

Column used to flag recovery values that did not meet criteria* Values outside of QC limits

D Surrogate diluted out

M Matrix interference

PCB LCS ACCURACY REPORT

Lab ID: LCSS170629-14GC Column: DB-5/DB1701PDate Received: NASample wt/vol: 5gDate Extracted: 06/29/2017Matrix-Units: Soil-µg/KgDate Analyzed: 07/05/2017% Moisture: NAData file: Y4362.DDilution Factor: 1

	Conc.		Conc.	%Rec.	QC
Compound	Add	Sample	LCS	LCS	# Limits
Aroclor-1016	500	0.0	533.8	107	40-137
Aroclor-1260	500	0.0	497.5	100	57-147

	Aqueous	Soil/Sediment
LCS Recovery Limits (DKQP)	40-140	40-140

Column used to flag recovery values that did not meet criteria

* Values outside of QC limits

\$ Values outside of NJ DKQP limits

PCB MS/MSD ACCURACY REPORT

Lab ID: E17-05390	0-001				GC Column: DB-5/DB1701P				
Date Received: 06	/29/2017				Sar	nple wt/	vol: 5.37	7g	
Date Extracted: 06	/29/2017				Matrix-Units: Solid-ug/Kg				
Date Analyzed: 07	/05/2017				% Moisture: NA				
MS Data file: Y4	4363.D				Dil	ution Fa	ctor: 1		
MSD Data file: Y4	1364.D				Dil	ution Fa	ctor: 1		
	Conc.		Conc.	%Rec.		Conc.	%Rec.		
Compound	Add	Sample	MS	MS	#	MSD	MSD	# %RPD #	QC Limits
A	600	0.0	172 5	05		100 1	00	•	
Aroclor-1016	500	0.0	473.5	95		462.4	92	2	12-163/25
Aroclor-1260	500	0.0	440.6	88		395.4	79	11	16-178/27

	Aqueous	Soil/Sediment
MS/MSD Recovery Limits (DKQP)	30-150	30-150
MS/MSD RPD Limits (DKQP)	20	30

Column used to flag recovery and RPD values that did not meet criteria

* Values outside of QC limits

\$ Values outside of NJ DKQP limits

NC Not calculable

)

PCB METHOD BLANK SUMMARY

Lab File ID:	<u>Y4361.D</u>	Instrument ID:	<u>GC-Y</u>
Date Extracted:	06/29/2017	Matrix:	<u>SOIL</u>
Date Analyzed:	07/05/2017	Time Analyzed:	<u>11:51</u>

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS or LCSD, MS or MSD:

		Date	Time
Client ID	Lab Sample ID	Analyzed	Analyzed
PCB	LCSS170629-14	07/05/2017	12:09
PCB	E17-05390-001MS	07/05/2017	12:26
PCB	E17-05390-001MSD	07/05/2017	12:44
PCG-50-0	E17-05390-001	07/05/2017	13:01
PCG-50-0	E17-05390-002	07/05/2017	13:18
PCG-50-0	E17-05390-003	07/05/2017	13:36
PCG-50-0	E17-05390-004	07/05/2017	13:53
PCG-50-0	E17-05390-005	07/05/2017	14:10
PCG-50-0	E17-05390-006	07/05/2017	14:28
PCG-450-	E17-05391-001	07/05/2017	14:45
PCG-450-	E17-05391-002	07/05/2017	15:03
PCG-450-	E17-05391-003	07/05/2017	15:20
PCG-450-	E17-05391-004	07/05/2017	15:37
PCG-450-	E17-05391-005	07/05/2017	15:55
PCG-450-	E17-05391-006	07/05/2017	16:12
PCG-450-	E17-05391-007	07/05/2017	16:30
PCG-450-	E17-05391-008	07/05/2017	16:47
PCG-450-	E17-05391-009	07/05/2017	17:05
PCG-450-	E17-05391-006DL	07/06/2017	09:54

Date Analyzed:

<u>06/16/2017</u>

Instrument ID:	<u>GC-Y</u>
GC Column (1st):	<u>DB-5</u>

Data File:

<u>Y3983.D</u> <u>Y3982.D</u> <u>Y3981.D</u> <u>Y3980.D</u> <u>Y3979.D</u>

		RTO	DF STANE	ARDS		MEAN	RT WI	NDOW
Compound	10	50	500	1000	2000	RT	FROM	то
Aroclor-1016	3.28	3.29	3.29	3.29	3.29	3.29	3.22	3.36
Aroclor-1016 {2}	4.13	4.13	4.13	4.13	4.13	4.13	4.06	4.20
Aroclor-1016 {3}	4.68	4.69	4.69	4.69	4.68	4.68	4.61	4.75
Aroclor-1016 {4}	5.19	5.20	5.19	5.19	5.19	5.19	5.12	5.26
Aroclor-1016 {5}	5.59	5.59	5.59	5.59	5.59	5.59	5.52	5.66
Aroclor-1221			2.17				2.10	2.24
Aroclor-1221 {2}			3.08				3.01	3.15
Aroclor-1221 {3}			3.21				3.14	3.28
Aroclor-1221 {4}			3.29				3.22	3.36
Aroclor-1221 {5}			3.89				3.82	3.96
Aroclor-1232			3.29				3.22	3.36
Aroclor-1232 {2}			4.13				4.06	4.20
Aroclor-1232 {3}			4.80				4.73	4.87
Aroclor-1232 {4}			5.40				5.33	5.47
Aroclor-1232 {5}			5.59				5.52	5.66
Aroclor-1242			4.13				4.06	4.20
Aroclor-1242 {2}			5.07				5.00	5.14
Aroclor-1242 {3}			5.40				5.33	5.47
Aroclor-1242 {4}			6.10				6.03	6.17
Aroclor-1242 {5}			6.37				6.30	6.44
Aroclor-1248			4.53				4.45	4.61
Aroclor-1248 {2}			5.08				5.00	5.16
Aroclor-1248 {3}			5.40				5.32	5.48
Aroclor-1248 {4}			6.10				6.02	6.18
Aroclor-1248 {5}			6.37				6.29	6.45
Aroclor-1254			6.49				6.41	6.57
Aroclor-1254 {2}			6.93				6.85	7.01
Aroclor-1254 {3}			7.10				7.01	7.19
Aroclor-1254 {4}			7.53				7.44	7.62
Aroclor-1254 {5}			8.39				8.30	8.48
Aroclor-1260	8.38	8.38	8.38	8.38	8.38	8.38	7.48	9.28
Aroclor-1260 {2}	9.06	9.06	9.06	9.06	9.06	9.06	8.16	9.96
Aroclor-1260 {3}	9.54	9.53	9.53	9.53	9.53	9.53	8.63	10.43
Aroclor-1260 {4}	10.02	10.02	10.02	10.02	10.02	10.02	9.12	10.92
Aroclor-1260 {5}	11.08	11.08	11.08	11.08	11.08	11.08	10.18	11.98

Date Analyzed:	<u>06/16/2017</u>		Instrument ID: GC Column (1st):			<u>GC-Y</u> <u>DB-5</u>	
Data File:	<u>Y3983.D</u>	<u>Y3982.D</u>	<u>Y3981.D</u>	<u>Y3980.D</u>	<u>Y3979.D</u>		
	T	CALIB	RATION FA	CTORS			
Compound	10	50	500	1000	2000	MEAN	%RSD
Aroclor-1016	574793	617153	685529	663944	649996	638283	6.79
Aroclor-1016 {2}	887952	823631	903128	884636	845133	868896	3.82
Aroclor-1016 {3}	982786	1179449	1250157	1196509	1175466	1156874	8.80
Aroclor-1016 {4}	582434	545539	591672	557494	548079	565044	3.69
Aroclor-1016 {5}	898231	900419	989620	958836	957415	940904	4.26
Aroclor-1221			128318				
Aroclor-1221 {2}			494149				
Aroclor-1221 {3}			310617				
Aroclor-1221 {4}			1023072				
Aroclor-1221 {5}			213565				
Aroclor-1232			691554				
Aroclor-1232 {2}			386085				
Aroclor-1232 {3}			364866				
Aroclor-1232 {4}			369844				
Aroclor-1232 {5}			5 0 4050				
Aroclor-1242			717678				
Aroclor-1242 {2}			476541				
Aroclor-1242 {3}			628417				
Aroclor-1242 {4}			1066741				
Aroclor-1242 {5}			842758				
Aroclor-1248			1497470				
Aroclor-1248 {2}			857932				

1075252

1886522

1302700

2064723

1301576 2485702

2727557 2508808

3138931

1407688

2106415

4531643 4482311

1087019 1098348

3076464

1411449

2105079

2872101

1301725

3929630

1849361

899558

2862815

1395588

3831401

1927492

1082275

Aroclor-1248 {3}

Aroclor-1248 {4}

Aroclor-1248 {5}

Aroclor-1254 {3} Aroclor-1254 {4}

Aroclor-1254 {5}

Aroclor-1260 {2}

Aroclor-1260 {3}

Aroclor-1260 {4}

Aroclor-1260 {5}

Aroclor-1260

Aroclor-1254 Aroclor-1254 {2}

3129115

1352742

4579617

2159642

Average %RSD

1095968 1052634

3015885

1373838

4270920

2029598

4.56

3.39

8.42

6.58

8.15

5.85

Date Analyzed:

<u>06/16/2017</u>

Instrument ID:	<u>GC-Y</u>
GC Column (2nd):	<u>DB-1701P</u>

Data File:

<u>Y3983.C</u> <u>Y3982.C</u> <u>Y3981.C</u> <u>Y3980.C</u> <u>Y3979.C</u>

		RTO	OF STAND	ARDS		MEAN	RT WI	NDOW
Compound	10	50	500	1000	2000	RT	FROM	ТО
Aroclor-1016	3.74	3.74	3.75	3.75	3.75	3.75	3.68	3.82
Aroclor-1016 {2}	4.34	4.35	4.35	4.35	4.35	4.35	4.28	4.42
Aroclor-1016 {3}	5.10	5.10	5.10	5.10	5.10	5.10	5.03	5.17
Aroclor-1016 {4}	5.31	5.31	5.31	5.31	5.31	5.31	5.24	5.38
Aroclor-1016 {5}	5.48	5.48	5.48	5.48	5.48	5.48	5.41	5.55
Aroclor-1221			2.41				2.34	2.48
Aroclor-1221 {2}			3.42				3.35	3.49
Aroclor-1221 {3}			3.65				3.58	3.72
Aroclor-1221 {4}			3.75				3.68	3.82
Aroclor-1221 {5}			5.10				5.03	5.17
Aroclor-1232			3.65				3.58	3.72
Aroclor-1232 {2}			4.66				4.59	4.73
Aroclor-1232 {3}			5.10				5.03	5.17
Aroclor-1232 {4}			5.31				5.24	5.38
Aroclor-1232 {5}			6.08				6.01	6.15
Aroclor-1242			4.73				4.66	4.80
Aroclor-1242 {2}			5.48				5.41	5.55
Aroclor-1242 {3}			6.08				6.01	6.15
Aroclor-1242 {4}			6.23				6.16	6.30
Aroclor-1242 {5}			6.78				6.71	6.85
Aroclor-1248			5.10				5.02	5.18
Aroclor-1248 {2}			5.68				5.60	5.76
Aroclor-1248 {3}			6.08				6.00	6.16
Aroclor-1248 {4}			6.23				6.15	6.31
Aroclor-1248 {5}			6.58				6.50	6.66
Aroclor-1254			7.08	· · · · · · · · · · · · · · · · · · ·			7.00	7.16
Aroclor-1254 {2}			7.66				7.58	7.74
Aroclor-1254 {3}			8.10				8.01	8.19
Aroclor-1254 {4}			8.28				8.19	8.37
Aroclor-1254 {5}			9.10				9.01	9.19
Aroclor-1260	7.85	7.85	7.85	7.85	7.85	7.85	6.95	8.75
Aroclor-1260 {2}	8.10	8.10	8.10	8.10	8.10	8.10	7.20	9.00
Aroclor-1260 {3}	9.70	9.70	9.70	9.70	9.70	9.70	8.80	10.60
Aroclor-1260 {4}	10.21	10.20	10.20	10.20	10.20	10.20	9.30	11.10
Aroclor-1260 {5}	10.80	10.79	10.79	10.79	10.79	10.79	9.89	11.69

Date Analyzed:	<u>06/16/2017</u>			Instrument l GC Column	(D: (2nd):	<u>GC-Y</u> <u>DB-1701P</u>	
Data File:	<u>Y3983.C</u>	<u>Y3982.C</u>	<u>Y3981.C</u>	<u>Y3980.C</u>	<u>¥3979.C</u>		
		CALIB	RATION FA	CTORS			
Compound	10	50	500	1000	2000	MEAN	%RS
Aroclor-1016	489086	462974	441638	408786	397332	439963	8.61
Aroclor-1016 {2}	970843	952702	871963	835973	820448	890386	7.65
Aroclor-1016 {3}	2145454	2050432	1976078	1911170	1929579	2002543	4.81
Aroclor-1016 {4}	779242	978495	871169	825226	815964	854019	9.01
Aroclor-1016 {5}	667972	710343	663475	637878	638307	663595	4.46
Aroclor-1221			94396				
Aroclor-1221 {2}			284451				
Aroclor-1221 {3}			190658				
Aroclor-1221 {4}			647487				
Aroclor-1221 {5}			120049				
Aroclor-1232			131309				
Aroclor-1232 {2}			126332				
Aroclor-1232 {3}			852020				
Aroclor-1232 {4}			391947				
Aroclor-1232 {5}			405510				
Aroclor-1242			305513				
Aroclor-1242 {2}			535631				
Aroclor-1242 {3}			686097				
Aroclor-1242 {4}			581315				
Aroclor-1242 {5}			1151749				
Aroclor-1248			977401				
Aroclor-1248 {2}			1466918				
Aroclor-1248 {3}			1053808				
Aroclor-1248 {4}			973261				
Aroclor-1248 {5}			542146				
Aroclor-1254			1408042				
Aroclor-1254 {2}			1120344				
Aroclor-1254 {3}			745551				
Aroclor-1254 {4}			1137374				
Aroclor-1254 {5}			1718777				
Aroclor-1260	818516	844376	795171	768414	776474	800590	3.89
Aroclor-1260 {2}	1295423	1243249	1166349	1119263	1122015	1189260	6.53
Aroclor-1260 {3}	1201055	1143794	1145528	1118396	1179752	1157705	2.82
Aroclor-1260 {4}	2824762	2829523	2924476	2881824	2995235	2891164	2.46
Aroclor-1260 {5}	1942866	2009132	2070818	2021638	2089479	2026787	2.84
					Average %	ARSD	5.31

<u>06/16/2017</u>

Data File:	<u> </u>	<u>Y3982.D</u>	<u>Y3981.D</u>	<u>Y3980.D</u>	<u>Y3979.D</u>			
		RT	OF STAN	MEAN	RT WI	NDOW		
Compound	10	50	500	1000	2000	RT	FROM	ТО
Aroclor-1262	ľ		8.67		1		8.55	8.79
Aroclor-1262 {2}		1	9.53				9.41	9.65
Aroclor-1262 {3}			10.17				10.05	10.29
Aroclor-1262 {4}			10.25				10.13	10.37
Aroclor-1262 {5}			11.08				10.96	11.20
Aroclor-1268			10.17				10.05	10.29
Aroclor-1268 {2}			10.25				10.13	10.37
Aroclor-1268 {3}			10.72	1		1	10.60	10.84
Aroclor-1268 {4}			10.85				10.73	10.97
Aroclor-1268 {5}		1	11.68				11.56	11.80

GC Column (2nd): DB-1701P

Instrument ID:

GC Column (1st):

<u>GC-Y</u>

<u>DB-5</u>

Data File:

Date Analyzed:

<u>Y3983.C</u> <u>Y3982.C</u> <u>Y3981.C</u> <u>Y3980.C</u> <u>Y3979.C</u>

		RT (OF STANE		MEAN	RT WI NDOW		
Compound	10	50	500	1000	2000	RT	FROM	ТО
Aroclor-1262			9.70				9.58	9.82
Aroclor-1262 {2}			10.20				10.08	10.32
Aroclor-1262 {3}			10.70				10.58	10.82
Aroclor-1262 {4}			10.79				10.67	10.91
Aroclor-1262 {5}			11.39				11.27	11.51
Aroclor-1268			10.70				10.58	10.82
Aroclor-1268 {2}			10.78				10.66	10.90
Aroclor-1268 {3}			11.04				10.92	11.16
Aroclor-1268 {4}			11.83				11.71	11.95
Aroclor-1268 {5}			12.26				12.14	12.38

Date Analyzed:	<u>06/16/2017</u>			Instrumen GC Colum	t ID: n (1st):	<u>GC-Y</u> <u>DB-5</u>					
Data File:	<u>Y3983.D</u>	<u>Y3982.D</u>	<u>Y3981.D</u>	<u>Y3980.D</u>	<u>Y3979.D</u>						
CALIBRATION FACTORS											
Compound	10	50	500	1000	2000	MEAN	%RSD				
Aroclor-1262			2812669								
Aroclor-1262 {2}			5584001								
Aroclor-1262 {3}			2305558								
Aroclor-1262 {4}			2590700								
Aroclor-1262 {5}			2076191								
Aroclor-1268			6316558								
Aroclor-1268 {2}			6892845								
Aroclor-1268 {3}			5738393								
Aroclor-1268 {4}			1443744								
Aroclor-1268 {5}			17140314								

GC Column (2nd): <u>DB-1701P</u>

Data File:

<u>Y3983.C</u> <u>Y3982.C</u> <u>Y3981.C</u> <u>Y3980.C</u> <u>Y3979.C</u>

	CALIBRATION FACTORS									
Compound	10	50	500	1000	2000	MEAN	%RSD			
Aroclor-1262			1432566							
Aroclor-1262 {2}			3680107							
Aroclor-1262 {3}			1363490							
Aroclor-1262 {4}			2584717							
Aroclor-1262 {5}			498883							
Aroclor-1268			4131901							
Aroclor-1268 {2}			4097990							
Aroclor-1268 {3}			3507105							
Aroclor-1268 {4}			1418886							
Aroclor-1268 {5}			10817383							

Date/Time Analyzed:	<u>07/05/201</u>	7		D:	<u>GC-Y</u> <u>DB-5</u>	
Data File:	<u>Y4360.D</u>			st):		
<u> </u>		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.29	3.22	3.36	638283	692096	8.43
Aroclor-1016 {2}	4.13	4.06	4.20	868896	948993	9.22
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1270968	9.86
Aroclor-1016 {4}	5.20	5.12	5.26	565044	571085	1.07
Aroclor-1016 {5}	5.59	5.52	5.66	940904	977963	3.94
Aroclor-1260	8.39	7.48	9.28	3015885	2808104	6.89
Aroclor-1260 {2}	9.06	8.16	9.96	1373838	1214721	11.58
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	3484532	18.41
Aroclor-1260 {4}	10.02	9.12	10.92	2029598	1668759	17.78
Aroclor-1260 {5}	11.08	10.18	11.98	1052634	1032751	1.89

Data File:

<u>Y4360.C</u>

GC Column (2nd): <u>DB-1701P</u>

		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.75	3.68	3.82	439963	463350	5.32
Aroclor-1016 {2}	4.35	4.28	4.42	890386	910464	2.25
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2075455	3.64
Aroclor-1016 {4}	5.31	5.24	5.38	854019	885141	3.64
Aroclor-1016 {5}	5.48	5.41	5.55	663595	677884	2.15
Aroclor-1260	7.85	6.95	8.75	800590	787204	1.67
Aroclor-1260 {2}	8.11	7.20	9.00	1189260	1120495	5.78
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1166295	0.74
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	2709786	6.27
Aroclor-1260 {5}	10.80	9.89	11.69	2026787	1941381	4.21

Date/Time Analyzed:	Fime Analyzed: <u>07/05/2017</u>			Instrument I	D:	<u>GC-Y</u>	
Data File:	<u>Y4380.D</u>	<u>Y4380.D</u>			GC Column (1st):		
	l l	RT WI	NDOW			T	
Compound	RT	FROM	ТО	Avg CF	CC CF	%D	
Aroclor-1016	3.29	3.22	3.36	638283	727917	14.04	
Aroclor-1016 {2}	4.13	4.06	4.20	868896	958782	10.34	
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1302893	12.62	
Aroclor-1016 {4}	5.20	5.12	5.26	565044	571396	1.12	
Aroclor-1016 {5}	5.60	5.52	5.66	940904	1016918	8.08	
Aroclor-1260	8.39	7.48	9.28	3015885	2947930	2.25	
Aroclor-1260 {2}	9.07	8.16	9.96	1373838	1266602	7.81	
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	3835912	10.19	
Aroclor-1260 {4}	10.02	9.12	10.92	2029598	1777119	12.44	
Aroclor-1260 {5}	11.08	10.18	11.98	1052634	987168	6.22	

Data File:

<u>Y4380.C</u>

GC Column (2nd): DB-1701P

		RT WI	NDOW			
Compound	RT	FROM	TO	Avg CF	CC CF	%D
Aroclor-1016	3.74	3.68	3.82	439963	490545	11.50
Aroclor-1016 {2}	4.35	4.28	4.42	890386	959359	7.75
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2220566	10.89
Aroclor-1016 {4}	5.31	5.24	5.38	854019	900849	5.48
Aroclor-1016 {5}	5.48	5.41	5.55	663595	704413	6.15
Aroclor-1260	7.85	6.95	8.75	800590	825064	3.06
Aroclor-1260 {2}	8.11	7.20	9.00	1189260	1172120	1.44
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1233580	6.55
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	3140139	8.61
Aroclor-1260 {5}	10.79	9.89	11.69	2026787	2312468	14.10

Date/Time Analyzed:	<u>07/06/201</u>	06/2017 Instrument ID:				<u>GC-Y</u>	
Data File:	<u>¥4387.D</u>			GC Column (1st):			
		RT WI	NDOW				
Compound	RT	FROM	ТО	Avg CF	CC CF	%D	
Aroclor-1016	3.29	3.22	3.36	638283	697812	9.33	
Aroclor-1016 {2}	4.13	4.06	4.20	868896	914679	5.27	
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1252220	8.24	
Aroclor-1016 {4}	5.20	5.12	5.26	565044	575003	1.76	
Aroclor-1016 {5}	5.60	5.52	5.66	940904	984227	4.60	
Aroclor-1260	8.39	7.48	9.28	3015885	3014532	0.04	
Aroclor-1260 {2}	9.07	8.16	9.96	1373838	1326911	3.42	
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	4146792	2.91	
Aroclor-1260 {4}	10.02	9.12	10.92	2029598	1891143	6.82	
Aroclor-1260 {5}	11.09	10.18	11.98	1052634	882724	16.14	

Data File:

<u>Y4387.C</u>

GC Column (2nd): <u>DB-1701P</u>

		RT WI	NDOW			
Compound	RT	FROM TO		Avg CF	CC CF	%D
Aroclor-1016	3.74	3.68	3.82	439963	446015	1.38
Aroclor-1016 {2}	4.35	4.28	4.42	890386	876322	1.58
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2019937	0.87
Aroclor-1016 {4}	5.31	5.24	5.38	854019	863644	1.13
Aroclor-1016 {5}	5.48	5.41	5.55	663595	665596	0.30
Aroclor-1260	7.85	6.95	8.75	800590	785210	1.92
Aroclor-1260 {2}	8.11	7.20	9.00	1189260	1126867	5.25
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1104632	4.58
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	2862296	1.00
Aroclor-1260 {5}	10.80	9.89	11.69	2026787	1987570	1.93

Date/Time Analyzed:	7		<u>GC-Y</u>				
Data File:	<u>Y4390.D</u>			GC Column (1	<u>DB-5</u>		
		RT WI NDOW		-			
Compound	RT	FROM	то	Avg CF	CC CF	%D	
Aroclor-1016	3.29	3.22	3.36	638283	683598	7.10	
Aroclor-1016 {2}	4.13	4.06	4.20	868896	899651	3.54	
Aroclor-1016 {3}	4.69	4.61	4.75	1156874	1236290	6.86	
Aroclor-1016 {4}	5.20	5.12	5.26	565044	576870	2.09	
Aroclor-1016 {5}	5.60	5.52	5.66	940904	981125	4.27	
Aroclor-1260	8.39	7.48	9.28	3015885	2868209	4.90	
Aroclor-1260 {2}	9.07	8.16	9.96	1373838	1253235	8.78	
Aroclor-1260 {3}	9.54	8.63	10.43	4270920	3905546	8.55	
Aroclor-1260 {4}	10.03	9.12	10.92	2029598	1767656	12.91	
Aroclor-1260 {5}	11.09	10.18	11.98	1052634	918447	12.75	

Data File:

<u>Y4390.C</u>

GC Column (2nd):

<u>DB-1701P</u>

		RT WI	NDOW			
Compound	RT	FROM	ТО	Avg CF	CC CF	%D
Aroclor-1016	3.74	3.68	3.82	439963	451151	2.54
Aroclor-1016 {2}	4.35	4.28	4.42	890386	889769	0.07
Aroclor-1016 {3}	5.10	5.03	5.17	2002543	2044008	2.07
Aroclor-1016 {4}	5.31	5.24	5.38	854019	880189	3.06
Aroclor-1016 {5}	5.48	5.41	5.55	663595	676596	1.96
Aroclor-1260	7.85	6.95	8.75	800590	799699	0.11
Aroclor-1260 {2}	8.10	7.20	9.00	1189260	1152448	3.10
Aroclor-1260 {3}	9.70	8.80	10.60	1157705	1119269	3.32
Aroclor-1260 {4}	10.21	9.30	11.10	2891164	2898362	0.25
Aroclor-1260 {5}	10.79	9.89	11.69	2026787	2004228	1.11

PCB RETENTION TIME SHIFT SUMMARY

Instrument ID:

GC-Y

Column: DB-5/DB-1701P

Surrogate RT from initial calibration :

	TCMX 1	2.82	DCB 1	<u>12.18</u>	TCMX 2	2	<u>2.87</u>		DCB 2	*	<u>12.48</u>	
		Lab	Date	Time	TCMX	1	DCB 1		тсмх 2	2	DCB 2	
Client ID		Sample ID	Analyzed	Analyzed	RT	#	RT	#	RT	#	RT	#
РСВ		BLKS170629-14	07/05/2017	11:51	2.82		12.18		2.87		12.48	
PCB		LCSS170629-14	07/05/2017	12:09	2.82		12.18		2.87		12.48	
PCB		E17-05390-001MS	07/05/2017	12:26	2.82		12.18		2.87		12.48	
PCB		E17-05390-001MSD	07/05/2017	12:44	2.82		12.18		2.87		12.48	
PCG-50-0		E17-05390-001	07/05/2017	13:01	2.82		12.18		2.87		12.49	
PCG-50-0		E17-05390-002	07/05/2017	13:18	2.82		12.18		2.87		12.49	
PCG-50-0		E17-05390-003	07/05/2017	13:36	2.82		12.18		2.87		12.49	
PCG-50-0		E17-05390-004	07/05/2017	13:53	2.82		12.18		2.87		12.48	
PCG-50-0		E17-05390-005	07/05/2017	14:10	2.82		12.18		2.87		12.52	
PCG-50-0		E17-05390-006	07/05/2017	14:28	2.82		12.18		2.87		12.60	Μ
PCG-450-		E17-05391-001	07/05/2017	14:45	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-002	07/05/2017	15:03	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-003	07/05/2017	15:20	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-004	07/05/2017	15:37	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-005	07/05/2017	15:55	2.82		12.18		2.87		12.49	
PCG-450-		E17-05391-006	07/05/2017	16:12	0.00	D	0.00	D	0.00	D	0.00	D
PCG-450-		E17-05391-007	07/05/2017	16:30	2.82		12.18		2.87		12.49	
PCG-450-		E17-05391-008	07/05/2017	16:47	2.82		12.17		2. 8 7		12.48	
PCG-450-		E17-05391-009	07/05/2017	17:05	2.82		12.18		2.87		12.48	
PCG-450-		E17-05391-006DL	07/06/2017	09:54	0.00	D	0.00	D	0.00	D	0.00	D

Surrogate QC Limits TCMX = Tetrachloro-m-xylene DCB = Decachlorobiphenyl

 $(\pm 0.10 \text{ Minutes }) \\ (\pm 0.10 \text{ Minutes })$

Column to be used to flag recovery values

* Values outside of QC limits

D Surrogate diluted out

M Matrix interference

PCB SAMPLE DATA

.

Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4371.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 14:45 Operator : IB Sample : PCG-450-,E17-05391-001,Xs,5.30g,0,20 Misc : 170629-14,06/29/17,06/29/17,5 ALS Vial : 12 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:27:39 2017 Ouant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : OLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #2 Phase: Signal #2 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds 1) STCMX2.822.871475.3E6949.3E636.97935.813Spiked Amount200.000Recovery=18.49%17.91%2) SDCB12.1812.481016.5E6786.8E625.69328.901mSpiked Amount200.000Recovery=12.85%14.45% N.D. Target Compounds N.D. Sum Aroclor-1016 0 0 0.000 Average Aroclor-1016 N.D. N.D. 0.000 0.000 N.D. 0 Sum Aroclor-1221 0 Average Aroclor-1221 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1260 Average Aroclor-1260 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.




Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4372.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 15:03 Operator : IB Sample : PCG-450-,E17-05391-002,Xs,5.31g,0,20 Misc : 170629-14,06/29/17.06/29/17.1 ALS Vial : 13 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:34:08 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 · · · · · · System Monitoring Compounds 1) S TCMX 2.82 2.87 6660.1E6 5215.6E6 166.940 196.759

 Spiked Amount
 200.000
 Recovery
 =
 83.47%
 98.38%

 2) S
 DCB
 12.18
 12.48
 4882.8E6
 6354.1E6
 123.416
 233.403m#

 Spiked Amount
 200.000
 200.000
 200.000
 200.000
 200.000

 Recovery = 61.71% 116.70% Spiked Amount 200.000 Target Compounds 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1016 0.000 Average Aroclor-1016 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1221 0 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.00 0 0 Sum Aroclor-1254 0.000 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 0.000 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 10.17 10.70 1866.3E6 1723.2E6 295.468m 417.039m# 43) L10 Aroclor-1268 43)110AFOCIOF-126810.1710.70100.5661723.246233.400m417.039mm44)L10Aroclor-1268 $\{2\}$ 10.2610.792151.8E62236.9E6312.179m545.853m#45)L10Aroclor-1268 $\{3\}$ 10.7311.04706.9E6437.3E6123.183m124.691m46)L10Aroclor-1268 $\{4\}$ 10.8611.83349.6E6639.2E6242.168m450.488m#47)L10Aroclor-1268 $\{5\}$ 11.6912.26803.6E6621.5E646.883m57.454m47)L10Aroclor-1268 $\{5\}$ 11.6912.26803.6E6621.5E646.883m57.454m 5878.2E6 5658.1E6 1019.881 1595.524 Sum Aroclor-1268 203.976 319.105 Average Aroclor-1268 -----(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. E17-05391 0039





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4373.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 15:20 Operator : IB Sample : PCG-450-,E17-05391-003,Xs,5.58g,0,20 Misc : 170629-14,06/29/17.06/29/17.10 ALS Vial : 14 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 15:35:23 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : OLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Siqnal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds 1) STCMX2.822.87727.7E6492.2E618.24018.570mSpiked Amount200.000Recovery=9.12%9.29%2) SDCB12.1812.48751.9E6485.2E619.005m17.824mSpiked Amount200.000Recovery=9.50%8.91%Target Compounds N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1260 0 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4373.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH : 05 Jul 2017 15:20 Acq On Operator : IB : PCG-450-,E17-05391-003,Xs,5.58g,0,20 Sample : 170629-14,06/29/17,06/29/17,10 Misc ALS Vial : 14 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Ouant Time: Jul 05 15:35:23 2017 Ouant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #2 Phase: Signal #2 Info : Signal #1 Info :



File :C:\MSDCHEM\1\DATA\17-07-05\Y4373.D
Operator : IB
Acquired : 05 Jul 2017 15:20 using AcqMethod YPCB0616.M
Instrument : GC-Y
Sample Name: PCG-450-,E17-05391-003,Xs,5.58g,0,20
Misc Info : 170629-14,06/29/17,06/29/17,10
Vial Number: 14



File :C:\MSDCHEM\1\DATA\17-07-05\Y4373.D
Operator : IB
Acquired : 05 Jul 2017 15:20 using AcqMethod YPCB0616.M
Instrument : GC-Y
Sample Name: PCG-450-,E17-05391-003,Xs,5.58g,0,20
Misc Info : 170629-14,06/29/17,06/29/17,10
Vial Number: 14



Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4374.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 15:37 Operator : IB Sample : PCG-450-,E17-05391-004,Xs,5.23g,0,20 Misc : 170629-14,06/29/17,06/29/17,5 ALS Vial : 15 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 16:17:01 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds 1) STCMX2.822.871460.3E61048.4E636.604Spiked Amount200.000Recovery=18.30% 39.552

 Spiked Amount
 200.000
 Recovery
 =
 18.30%
 19.78%

 2) S
 DCB
 12.18
 12.48
 962.7E6
 1042.8E6
 24.333m
 38.306m#

 Spiked Amount
 200.000
 Recovery
 =
 12.17%
 19.75%

 Target Compounds 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1221 0 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1248 Average Aroclor-1248 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1268 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4374.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 15:37 Operator : IB : PCG-450-,E17-05391-004,Xs,5.23g,0,20 Sample : 170629-14,06/29/17,06/29/17,5 Misc ALS Vial : 15 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 16:17:01 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info :



File :C:\MSDCHEM\1\DATA\17-07-05\Y4374.D
Operator : IB
Acquired : 05 Jul 2017 15:37 using AcqMethod YPCB0616.M
Instrument : GC-Y
Sample Name: PCG-450-,E17-05391-004,Xs,5.23g,0,20
Misc Info : 170629-14,06/29/17,06/29/17,5
Vial Number: 15



File :C:\MSDCHEM\1\DATA\17-07-05\Y4374.D
Operator : IB
Acquired : 05 Jul 2017 15:37 using AcqMethod YPCB0616.M
Instrument : GC-Y
Sample Name: PCG-450-,E17-05391-004,Xs,5.23g,0,20
Misc Info : 170629-14,06/29/17,06/29/17,5
Vial Number: 15



Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4375.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 15:55 Operator : IB Sample : PCG-450-,E17-05391-005,Xs,5.20g,0,20 Misc : 170629-14,06/29/17,06/29/17,10 ALS Vial : 16 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 05 16:20:03 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #1 Info : Signal #2 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 _____ System Monitoring Compounds 1) S TCMX2.822.87758.3E6492.5E619.00718.581Spiked Amount200.000Recovery=9.50%9.29%2) S DCB12.1812.49509.0E6610.6E612.86422.428m#Spiked Amount200.000Recovery=6.43%11.21% Target Compounds 0 0 N.D. N.D. N.D. 0.000 0.000 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1268 0 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

YPCB0616.M Thu Jul 06 12:04:08 2017 GC Y





Signal #2 Phase: Signal #2 Info :



Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4376.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 16:12 Operator : IB Sample : PCG-450-,E17-05391-006,Xs,5.62g,0,20 : 170629-14,06/29/17,06/29/17,2000 Misc ALS Vial : 17 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 06 08:39:27 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 ------System Monitoring Compounds Target Compounds 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1248 0.000 Average Aroclor-1248 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1254 0.000 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 0.000 Average Aroclor-1262

 43)
 L10
 Aroclor-1268
 10.17
 10.70
 30195.3E6
 27964.6E6
 4780.335
 6767.974
 #

 44)
 L10
 Aroclor-1268
 {2}
 10.26
 10.79
 34651.5E6
 33856.2E6
 5027.172
 8261.669
 #

 45)
 L10
 Aroclor-1268
 {3}
 10.73
 11.04
 11148.9E6
 8062.1E6
 1942.863
 2298.777

 46)
 L10
 Aroclor-1268
 {4}
 10.86
 11.83
 3750.0E6
 22511.1E6
 2597.445
 15865.330
 #

 47)
 L10
 Aroclor-1268
 {5}
 11.69
 12.26
 39969.7E6
 43884.3E6
 2331.914
 4056.831
 #

 50m
 Aroclor-1268
 5
 11.69
 12.26
 39969.7E6
 136278
 3E6
 16679
 730
 37250
 55

 119715.5E6 136278.3E6 16679.730 37250.581 Sum Aroclor-1268 3335.946 7450.116 Average Aroclor-1268 -----(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.





Data Path : C:\MSDCHEM\1\DATA\17-07-06\ Data File : Y4389.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 06 Jul 2017 9:54 Operator : IB Sample : PCG-450-,E17-05391-006DL,Xs,5.62g,0,20 Misc : 170629-14,06/29/17,06/29/17.20000 ALS Vial : 17 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 06 10:07:07 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : OLast Update : Thu Jul 06 09:50:54 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 -----System Monitoring Compounds N.D. 0.000 Target Compounds 0 N.D. Sum Aroclor-1016 0 0.000 Average Aroclor-1016 N.D. N.D. 0 0 0.000 Sum Aroclor-1221 0.000 Average Aroclor-1221 N.D. 0 N.D. 0 0.000 Sum Aroclor-1232 0.000 Average Aroclor-1232 N.D. N.D. 0 0 Sum Aroclor-1242 N.D. N.D. 0.000 0.000 Average Aroclor-1242 N.D. N.D. 0 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 N.D. 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 10.17 10.70 3264.0E6 2530.9E6 516.731 612.530 43) L10 Aroclor-1268 43)110Alocior 126810.1710.793827.2E63076.8E6555.240750.817#44)L10Aroclor - 1268 $\{2\}$ 10.2610.793827.2E63076.8E6555.240750.817#45)L10Aroclor - 1268 $\{3\}$ 10.7311.041241.9E6756.4E6216.421215.66946)L10Aroclor - 1268 $\{4\}$ 10.8611.83492.0E61841.4E6340.7871297.800#47)L10Aroclor - 1268 $\{5\}$ 11.6912.264213.4E63957.9E6245.820365.885#423.25EEC1216.2EEC1216.2222.701 13038.5E6 12163.5E6 1874.999 3242.701 Sum Aroclor-1268 375.000 648.540 Average Aroclor-1268





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4377.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 16:30 Operator : IB Sample : PCG-450-,E17-05391-007,Xs,5.73g,0,20 Misc : 170629-14,06/29/17,06/29/17,1 ALS Vial : 18 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 06 08:45:12 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Ouant Title : OLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 _____ System Monitoring Compounds 1) S TCMX2.822.876720.7E65118.4E6168.458193.092Spiked Amount200.000Recovery=84.23%96.55%2) S DCB12.1812.495325.7E66272.2E6134.611m230.394m#Spiked Amount200.000Recovery=67.31%115.20% Target Compounds м.D. N.D. 0.000 0.00 0 0 N.D. Sum Aroclor-1016 0.000 Average Aroclor-1016 N.D. 0 0 N.D. N.D. 0.000 0.000 N.D. Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 N.D. 0 Sum Aroclor-1232 0 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4378.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 16:47 Operator : IB Sample : PCG-450-,E17-05391-008,Xs,5.63g,0,20 Misc : 170629-14,06/29/17.06/29/17.40 ALS Vial : 19 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 06 08:46:53 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 -----System Monitoring Compounds by Section Monitoring CompositionCompositionCompositionComposition1) S TCMX2.822.87158.7E6110.3E63.9774.159mSpiked Amount200.000Recovery=1.99%2.08%2) S DCB12.1712.48213.0E6182.4E65.384m6.699mSpiked Amount200.000Recovery=2.69%3.35% 3.977 Target Compounds 0 0 N.D. N.D. N.D. 0.000 0.000 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1248 Average Aroclor-1248 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1260 Average Aroclor-1260 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1262 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

YPCB0616.M Thu Jul 06 12:04:17 2017 GC_Y





Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4379.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH Acq On : 05 Jul 2017 17:05 Operator : IB Sample : PCG-450-,E17-05391-009,Xs,5.58g,0,20 : 170629-14,06/30/17,06/29/17,10 Misc ALS Vial : 20 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Quant Time: Jul 06 08:47:45 2017 Quant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 ng#2 System Monitoring Compounds 19.997m 1) S TCMX 2.82 2.87 782.6E6 530.1E6 19.617 Recovery = 9.81%Spiked Amount 200.000 10.00% 2) S DCB 12.18 12.48 649.3E6 690.8E6 16.412m 25.375m# Spiked Amount 200.000 Recovery = 8.21% 12.69% Target Compounds N.D. N.D. 0.000 0.000 0 0 N.D. Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1221 0.000 Average Aroclor-1221 N.D. N.D. 0 0.000 0 Sum Aroclor-1232 0.000 Average Aroclor-1232 N.D. . D. 0.000 N.D. 0 0 Sum Aroclor-1242 0.000 Average Aroclor-1242 N.D. N.D. 0.000 0.000 N.D. 0 0 Sum Aroclor-1248 0.000 Average Aroclor-1248 N.D. 0.000 N.D. 0 0 Sum Aroclor-1254 0.000 Average Aroclor-1254 0 N.D. 0.000 N.D. 0 Sum Aroclor-1260 0.000 Average Aroclor-1260 N.D. 0.000 0 N.D. N.D. 0 Sum Aroclor-1262 0.000 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 -----

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.







INTEGRATED ANALYTICAL LABORATORIES

PCB's

Lab ID: BLKS170629-14 Client ID: PCB Date Received: NA Date Extracted: 06/29/2017 Date Analyzed: 07/05/2017 Data file: Y4361.D GC Column: DB-5/DB1701P Sample wt/vol: 5g Matrix-Units: Soil-mg/Kg Dilution Factor: 1 % Moisture: NA

Compound	Concentration	Q	RL	MDL
Aroclor-1016	ND		0.040	0.016
Aroclor-1221	ND		0.040	0.016
Aroclor-1232	ND		0.040	0.016
Aroclor-1242	ND		0.040	0.016
Aroclor-1248	ND		0.040	0.016
Aroclor-1254	ND		0.040	0.016
Aroclor-1260	ND		0.040	0.016
Aroclor-1262	ND		0.040	0.016
Aroclor-1268	ND		0.040	0.016
PCBs	ND		0.040	0.016
D Dilution Performed			B Compound det	ected in Blank
			`	

J --- Value Less than RL & greater than MDL E --- Exceeds upper level of Calibration curve

C ---- Common laboratory contamination

Data Path : C:\MSDCHEM\1\DATA\17-07-05\ Data File : Y4361.D Signal(s) : Signal #1: ECD1B.CH Signal #2: ECD2A.CH : 05 Jul 2017 11:51 Acq On Operator : IB Sample : PCB, BLKS170629-14, S, 5g, 0, 20 Misc : 170629-14, 06/29/17, NA, 1 ALS Vial : 2 Sample Multiplier: 1 Integration File signal 1: EVENTS.E Integration File signal 2: EVENTS2.E Ouant Time: Jul 05 13:43:08 2017 Ouant Method : C:\MSDCHEM\1\METHODS\YPCB0616.M Quant Title : QLast Update : Wed Jul 05 11:45:09 2017 Response via : Initial Calibration Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped Volume Inj. : Signal #2 Phase: Signal #1 Phase : Signal #2 Info : Signal #1 Info : Compound RT#1 RT#2 Resp#1 Resp#2 ng#1 nq#2 System Monitoring Compounds 1) S TCMX2.822.877551.8E64969.5E6189.291187.478Spiked Amount200.000Recovery=94.65%93.74%2) S DCB12.1812.485022.9E64592.4E6126.957168.693#Spiked Amount200.000Recovery=63.48%84.35%Target Compounds 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1016 Average Aroclor-1016 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1221 Average Aroclor-1221 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1232 Average Aroclor-1232 N.D. N.D. 0.000 0.000 0 0 Sum Aroclor-1242 Average Aroclor-1242 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1248 Average Aroclor-1248 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1254 Average Aroclor-1254 0 N.D. N.D. 0.000 0.000 Sum Aroclor-1260 0 Average Aroclor-1260 0 N.D. N.D. 0.000 0.00 0 Sum Aroclor-1262 0.000 Average Aroclor-1262 0 N.D. N.D. 0.000 0.000 0 Sum Aroclor-1268 Average Aroclor-1268 _____

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.





SAMPLE TRACKING

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Integrated Ana 273 Franklin R	vanuupii, nu v
	Interveted Anshrical Lahnratonies LLC

sgrated Analytical Labs 3 Franklin Road ndoiph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252 Fax: 973-989-5288 Web: www.lalonline.com

Integrated Analytical Laboratories LLC	pu, nJ 07005												
Customer Informatio	uc		Reportin	g Informat	íon		Charge	Deli	verables		EDDs	Concentrations Expect	ted:
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LN Tros							96 hr - 35% 5 day - 25%	Reduced		∎ ₽	approved custom EDD	previously analyzed by l	IAL
Telephone #: 07 239	522	Attn:				Ę	6-9 day - 10%	C Regulatory/	ASP Catego	۲۰	NO EDD REQ'D		NO
Fax#: 973 739 J	54 5	FAX#			• .			Turn-Around	Time (TAT)		Regul	atory Requirement	
Project Manager: C /h. Hma	2	INVOICE TO:				S CONTRACT	tandard (10 b	usiness days) Verl	bal	/-	New Jersey	New York	
EMAIL Address Choffman 6 et		Address:	Same				ush/date needed <u>miy</u> If pre-appro	**(bev	1 77 1	the)	CWQS	AWQS (TOGS Table 1)	
Project Name Gial / Colortho C	Service ()						ard Copy: S	itd 3 week	Other - Ci	11 torprice		GWEL (TOGS Table 5)	
Project Location (State):		Attn:					Petroleum	Hydrocarbons -	Selection is RE	QUIRED	SRS	Part 375-6.8(a) - Unrestric	ted
Bottle Order #:		P0 #				2 week	ionus și (tó - Category 1	AT for PHC (If other than 2 v	veeks):	Ecological	Part 375-6.8(b) - Restricte	Ð
Report to"/"invoice To" same a	is above	Quote #					J. MEHO	H-Childry 2				CP-51 Table 2 or 3 (select required)	tlon
Complete hur							- manu	actionated - Carlo	DR0-8015			OTHER Reg. Req. (speci	\$
Sampred by: KN CP CH		DW - Drinking	Water	0-0			-	IALYTICAL PARA	METERS (please (note if conti	ngent)		
COMPLETED BY IAL: Failer	ent Bental	WW - Waste V GW - Groundy	Vatier vatier	S-Sol SOL-Solid			SY Are	chion Meth	al storal	135405	ó!		
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Des (De: 	1 = None	A = Amber Glass	Special In	structions/0	ier type (u	lanon ac	D comments:				_	spe # 699	
Cumpletely. Samples cannot be	2 = HCI 3 = HNO3	B = Plastic C = Vial	CAL	C. 184	man	2.4	2 NY QU.	stow	NOUAL	daehver	reevi-jar.co	4m / ([, [,	
processed and the turnaround time (TAT) will not start until any	4 = MeOH 5 = NaOH	D = Glass E = EnCorre	Report	+ + = : =	skorbe	leeh	1-1NC. C	on, chat	haneehi		2	Cooler Temp:	ပ္
ambiguities have been resolved.	6 = H2SO4	T = Terracore		And the second second second		e e secondoradore Secondore				ved by Elonat	ure and Company)		
TAT starts the following day if samples rec'd at lab > 5PM.	/ = Omer Carrier (check o	: 94	When	il for	J		6/2	2/2 130	t.	えらく	4/2	-L L 29/17 13	Ş
BY EXECUTING THIS COC, THE CI IENT HAS READ AND		rier	,	7					\			•	
AGREESTO BE BOUND BY		ourier											
IAL'S IEMMS & CUNULIUMS (found on rear of pink copy).	FedEx/L	BS											
LAB COPIES - WHITE & YELLOW; CLIENT CO	PY - PINK			Certification ID	E TNI (TNIO	284); CT (P	1-0699); NJ (1475	i1); NY (11402); PA (68	-00773).				





PROJECT INFORMATION

RUSH

E17-05391: CASALE/PETRO GARWOOD

To: Charles Hoffman

Environmental Health Investigations, Inc. Fax: EMail: choffman@ehi-inc.com

Report To

Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871 Attn: Charles Hoffman

Not Required

<u>Bill To</u>

Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871 Attn: Tracy Brucato

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due	
Reduced		Jun 29, 2017 @ 13:00	NA	Jul 06, 2017	Jul 24, 2017 *	

* Any Conditional or Hold status will delay final hardcopy report sent date.

<u>Diskette Req.</u>

Lah ID	Client Sample ID	Denth Sa	mnling Time	Matrix	Unit Field nH/Temn	
05391-001	PCG-450-062917-1	NA 06	5/29/17@11:00	Solid	mg/Kg (ppm)	
03391-002	PRCG-450-062917-2	NA 100	29717@12000	Solid	mg/Kg (ppm)	
05391-003	PCG-450-062917-3	NA 06	6/29/17@11:00	Solid	mg/Kg (ppm)	
05391-004	PCG-450-062917-4	NA 06	/29/17@11:00	Solid	mg/Kg (ppm)	1.56
05391-005	i PCG-450-062917-5	NA 06	5/29/17@11:00	Solid	mg/Kg (ppm)	őzennek alla a
05391-000	> PCG-450-062917-6	NA 06	29/17/@TI:00	Solid	mg/Kg (ppm)	
05391-00	7 PCG-450-062917-7	NA 06	b/29/17@11:00	Solid	mg/Kg (ppm)	
05391-008	PCG-450-062917-8	NA 1 100	29/17/011:00	Solid	mg/Kg (ppm)	
05391-005	, PCG-430-062917-9	NA 00			ing/Kg (ppin)	
			1			
Sample #	Test	<u>Status</u>	<u>QA Method</u>	<u>TAT</u>	Holding Time Expires	
<u>Sample #</u> 001	<u>Test</u> TCL PCB	<u>Status</u> Analyze	<u>OA Method</u> 8082A	<u>TAT</u> RUSH 72 HRS	<u>Holding Time Expires</u> 6/29/2018	
<u>Sample #</u> 001 002	Test TCL PCB TCL PCB	<u>Status</u> Analyze Analyze	<u>OA Method</u> 8082A 8082A	<u>TAT</u> RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018	
<u>Sample #</u> 001 002 003	Test TCL PCB TCl-PCB TCL PCB	<u>Status</u> Analyze Analyze Analyze	<u>OA Method</u> 8082A 8082A 8082A 8082A	<u>TAT</u> RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Sample # 001 002 003 004	Test TCL PCB TCL PCB TCL PCB TCL PCB	Status Analyze Analyze Analyze Analyze	<u>QA Method</u> 8082A 8082A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018	
Sample # 001 002 003 004 005	Test TCL PCB TCL PCB TCL PCB TCL PCB	Status Analyze Analyze Analyze Analyze Analyze Analyze	<u>QA Method</u> 8082A 8082A 8082A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018	
Sample # 001 002; 003 004 005 006; *	Test TCL PCB TCL PCB TCL PCB TCL PCB TCL PCB TCL PCB	Status Analyze Analyze Analyze Analyze Analyze Analyze	OA Method 8082A 8082A 8082A 8082A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018	
Sample # 001 002 003 004 005 006.* 007	Test TCL PCB	Status Analyze Analyze Analyze Analyze Analyze Analyze Analyze	QA Method 8082A 8082A 8082A 8082A 8082A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018	
Sample # 001 002 003 004 005 006 007 008	Test TCL PCB TCL PCB	Status Analyze Analyze Analyze Analyze Analyze Analyze Analyze Analyze	QA Method 8082A 8082A 8082A 8082A 8082A 8082A 8082A 8082A 8082A	TAT RUSH 72 HRS RUSH 72 HRS	Holding Time Expires 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018 6/29/2018	

Project Notes:

NOTE 2 taken by kfalconer on 06/29/2017 04:22

EMAIL REPORTS TO:

CHOFFMAN@EHI-INC.COM;BKERBEL@EHI-INC.OM;JPVONDOEHREN@EHI-INC.COM

273 Franklin Road Randolph, NJ 07869 Phone: 973 361 4252 Fax: 973 989 5288



15391 066 (TNI01284) and maintains certification in Connecticut (Prt-0099), New Jersey (14751), New York (11402), and Pennsylvania (68-00773).



PROJECT INFORMATION

RUSH

E17-05391: CASALE/PETRO GARWOOD

NOTE 1 taken by kfalconer on 06/29/2017 04:23

PER COC INSTRUCTION: USE EXTRACTION METHOD 3500B/3540C OR 3500B/3550B

NOTE 3 taken by kim on 06/30/2017 10:22

SAMPLE PCG-450-062917-9 RECEIVED, NOT LISTED ON COC.

PER CHARLES HOFFMAN, PLEASE ANALYZE.



INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: E 17	05391	CLIENT:	ÉHT	
COOLER TEMPERA	TURE: 2° - 6°C:	✓ (See Chain of	Custody) Comments	
COC: COMPLET				<u> </u>
✓ = YES/NA]	VOA received: Encore (check one) Terra Co	IGW - Methanol Ore No Preservative	
 ✓ Bottles Inta ✓ no-Missing ✓ no-Extra Better 	ict Bottles ottles	Extra Sample	-9, labeled as #9	?
 ✓ Sufficient S ✓ no-headsp 	Sample Volume ace/bubbles in VOs			
✓ Labels inta	ct/correct			
✓ Correct bo	ttles/preservative	······································		
Multiphasic	Sample			
Sample to ✓ Chain of C	be Subcontracted			
¹ All samples with "Analyze Imm	nediately" holding times will	be analyzed by this laboratory past	the holding time. This includes but is not limi	ited to
the following tests: pH, Tempe	rature, Free Residual Chlo	rine, Total Residual Chlorine, Disso	ved Oxygen, Sulfite.	
	ENTS:		· · · · · · · · · · · · · · · · · · ·	
			Congliz	
SAMPLE(S) VERIFIE				
CORRECTIVE ACT				
If COC is NOT clear,	<u>STOP</u> until you g	et client to authorize/cla	rify work.	
CLIENT NOTIFIED:	YES	Date/ Time:	NO [
PROJECT CONTAC SUBCONTRACTED	T: LAB:	<u></u>		
DATE SHIPPED:				
ADDITIONAL COMM	IENTS:			
	#****	<u></u>		

VERIFIED/TAKEN BY:

INITIAL

BULK SAMPLE DATA FORM

ENVIRONMENTAL HEALTH INVESTIGATIONS, INC. PS 1 OF 2 **655 WEST SHORE TRAIL SPARTA, NJ 07871** PHONE: (973) 729-5649 FAX: (973) 729-5649

Client:

Ecol Seiences

Project #: 0215-6923

Location: Casale / Petro Garwood Property - Garwoon NJ

Date Collected: 6/19/17

Collected By: <u>CP KN CH</u>

Sample #	Type of Material	Location	Analysis Required PLM Only	Analysis Required NOB
PCG-450 062917 - 1	Window Caulk White	Petro - 450 South Ave		
PCG-450 063917 - 2	Window Glazing White	Petro-450 South AVE		
PCG-450 063917- 3	Window Coulic Grey	Petro 450 South Are		
PCG-450 062917-4	Door Caule - White	Petro 400 South Ave		
PCG-450 063917-5	Window Caulk Tan	Petro 450 South Are		
PCG-450 1062917-6	Asphalt Sidiry	Petro 450 South Ave		
PCG. 450 063917 7	Window Glaring Pink	Petro 450 South Ave		
PCG 450 062917-8	ROOFTML	Petro 450 South Ave		

Laboratory Custody Chronicle									
IAL Case No.		Client	Environme	ental Health Inv	vestigations, Inc.				
E17-03391		Project	CASALE/	PETRO GARV	VOOD				
	Reco	eived On	<u>6/29/2017</u>	<u>@13:00</u>					
Department: GC			Prep. Date	<u>Analyst</u>	<u>Analysis Date</u>	<u>Analyst</u>			
TCL PCB	391-001	Solid	6/29/17	Archimede	7/ 6/17	Iwona			
	-002	11	6/29/17	Archimede	7/ 6/17	Iwona			
"	-003	10 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	6/29/17	Archimede	7/ 6/17	Iwona			
	-004	11	6/29/17	Archimede	7/6/17	Iwona			
n and a start s	-005	1	6/29/17	Archimede	7/ 6/17	Iwona			
	-006	Electrony and a second s	6/29/17	Archimede	7/ 6/17	Iwona			
	-007		6/29/17	Archimede	7/ 6/17	Iwona			
	-008	11	6/29/17	Archimede	7/ 6/17	Iwona			
1	-009	1 (1) 	6/30/17	Archimede	7/ 6/17	Iwona			

Attachment **B**

EHI Wipe Sampling Evaluation

EcolSciences, Inc. Environmental Management & Regulatory Compliance



655 West Shore Trail Sparta, New Jersey 07871 Phone/Fax: 973-729-5649 www.ehi-inc.com

June 29, 2017

Email: erusso@russodevelopment.com

Mr. Ed Russo Russo Development 570 Commerce Blvd. Carlstadt, NJ 07072

Re: PCB Dust Wipe Sampling Former Alcoa Site, 450 - 490 South Ave. - "Area 5" Garwood, NJ EHI Project #: 0558-6896

Dear Mr. Russo:

Attached is our report relevant to the PCB dust wipe sampling conducted at the former Alcoa Site located at 450-490 South Avenue in Garwood, New Jersey.

Thank you for the opportunity to provide our services. Should you have any questions, please do not hesitate to contact me.

Very truly yours,

Jean-Paul von Doehren

Jean-Paul von Doehren Senior Project Manager



655 West Shore Trail Sparta, New Jersey 07871 Phone/Fax: 973-729-5649 www.ehi-inc.com

REPORT OF FINDINGS

PCB Dust Wipe Sampling

At:

"Area 5" 450-490 South Ave. Garwood, NJ

On Behalf Of:

Russo Development 570 Commerce Boulevard Carlstadt, NJ 07072

Survey Conducted: June 15, 2017

Report Dated: June 29, 2017

EHI Project #: 0558-6896

1.0 Introduction

Environmental Health Investigations, Inc. was retained by Russo Development to conduct a dust wipe sampling for the presence of Polychlorinated Biphenyls (PCBs) inside the former Alcoa structure located at 450-490 South Avenue in Garwood, New Jersey.

The survey was conducted by Mr. Jean-Paul von Doehren and Ms. Jill K. Wack of EHI on June 15, 2017.

2.0 Methods & Observations:

The wipe sampling was performed at the request of the US-EPA to determine the extent of PCB contamination in the settled dust on the structural roof/ceiling beams of an area defined as "Area 5" of the facility. An attached drawing located in *Appendix B* helps define all the "Areas" and further delineates the sample locations from inside "Area 5".

All dust wipe samples were collected and analyzed in accordance with the SW-846 Compendium (extraction via method 3550 and analysis via method 8082), the method in accordance with the Toxic Substances Control Act (TSCA) as administered by the US-EPA.

In order to collect the dust wipe samples, EHI utilized a combination of ladders and a 40' articulating man lift to access the steel structural components of the ceiling/roof structure. Samples were collected from the "top sides" of the steel to capture all the dust/particulate that may have settled on the structural steel /ceiling roof system over the years.

Once areas were selected for sampling, EHI utilized a 10 centimeter by 10 centimeter (100 cm²) template to delineate the sampling area. With the template in place, a 3 inch by 3 inch piece of gauze was wetted with a ratio 1:4 Acetone/Hexane mixture and EHI wiped the area. Standardized
PCB Dust Wipe Sampling June 15, 2017 EHI Project #:0558-6896

dust wipe collecting techniques were utilized to ascertain a complete picture of PCB contamination in the dust. This includes wiping north/south, folding over the gauze, then wiping east/west, folding the gauze again and wiping around all 4 corners. EHI also utilized a new set of rubber/latex gloves for the collection of each sample to avoid cross contamination. Once the area was wiped, EHI placed the gauze into a 2 ounce glass jar identifying the sample with a unique number.

One blank and duplicate wipe sample was also be submitted for analysis. The duplicate sample was collected from a spot adjacent to an initial sample. The blank sample was submitted without collecting any dust/particulate. Blank and duplicate samples are designed to provide a quality control for the field sampling personnel as well as the laboratory analysis personnel.

All collected wipe samples were placed along with ice packs inside a cooler and submitted to EMSL Analytical, Inc. located at 200 Rt. 130 North in Cinnaminson, New Jersey.

3.0 Summary of PCB Wipe Sample Results

A summary of the results for the analyses of the wipe samples collected as part of the project is provided below. *Appendix A* of this report contains a copy of the laboratory analytical report from EMSL Analytical, Inc.

According the US-EPA, *PCB-contaminated* is defined as a non-porous surface having a PCB surface concentration greater than 10 micrograms per 100 square centimeters and less than 100 micrograms per 100 square centimeters (> $10\mu g/100cm^2$ and < $100\mu g/100cm^2$). Samples with concentrations of PCBs in excess of $10\mu g/100cm^2$ are emboldened in the table below.

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-1	Area 5 - West Mezzanine:	Aroclor-1016	ND
	Top Side of I-Beam West Half of Mezzanine	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	1.0
		Aroclor-1260	ND
		Aroclor-1262	3.4
		Aroclor-1268	ND
RDV-061517-2	Area 5 - West Mezzanine:	Aroclor-1016	ND
	Top Side of I-Beam East Half of Mezzanine	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	0.79
		Aroclor-1260	ND
		Aroclor-1262	2.3
		Aroclor-1268	ND
RDV-061517-3	Area 5 - Open Area:	Aroclor-1016	ND
	Top Side of Beam Flange - West Side of Open Area	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	0.66
		Aroclor-1254	1.1
		Aroclor-1260	ND
		Aroclor-1262	1.2
		Aroclor-1268	1.1

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-4	Area 5 - Open Area:	Aroclor-1016	ND
	Top Side of Beam Connection Plate , Center of Open Area above Loading Dock Pit	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	2.8
		Aroclor-1254	4.1
		Aroclor-1260	ND
		Aroclor-1262	3.7
		Aroclor-1268	3.8
RDV-061517-5	Area 5 - Open Area:	Aroclor-1016	ND
	Open Area	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	3.0
		Aroclor-1254	3.3
		Aroclor-1260	ND
		Aroclor-1262	4.9
		Aroclor-1268	3.8
RDV-061517-6	DUPLICATE of:	Aroclor-1016	ND
	KDV-061517-4	Aroclor-1221	ND
	A A A	Aroclor-1232	ND
	Aroclor-126851517-5Area 5 - Open Area: Top Side of Beam Connection Plate, East Side of Open AreaAroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242Aroclor-1221 Aroclor-1242Aroclor-1232 	ND	
RDV-061517-6 DUPLICATE of: RDV-061517-4 Aroclor-1	Aroclor-1248	2.9	
		Aroclor-1254	4.3
		Aroclor-1260	ND
		Aroclor-1262	4.8
		Aroclor-1268	6.7

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-7	Blank	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	ND
		Aroclor-1260	ND
		Aroclor-1262	ND
		Aroclor-1268	ND
ND - indicates that RL (Reporting Lin	t the analyte was not detected at the reporting limit (RL) nit) = $0.5 \ \mu g/100 \ cm^2$		

4.0 Conclusion:

The wipe sampling of settled dust/particulate from the structural steel roof/ceiling system in Area 5 of the former Alcoa Site located at 450-490 South Avenue in Garwood, New Jersey yielded laboratory results that indicate PCB contamination as defined by the US-EPA. Three (3) collected wipe samples were found to have total PCB concentration above $10 \mu g/100 \text{ cm}^2$. The three samples were collected from two (2) locations, since one of the three samples was a duplicate. Below is summary of the locations where the PCB contaminated wipe samples were collected:

- Area 5 Open Area: Top Side of Beam Connection Plate , Center of Open Area above Loading Dock Pit (including Duplicate)
- Area 5 Open Area: Top Side of Beam Connection Plate, East Side of Open Area

Sampling By:

Report By:

Jean-Paul von Doehren Jill K. Wack

Jean–Paul von Doehren

Jean-Paul von Doehren Senior Project Manager

Reviewed By:

William S. Kerbel

William S. Kerbel, CIH President

A P P E N D I X

A

EMSL Analytical, Inc. - PCB Wipe Sample Results



EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08077 Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

6/23/2017

Attn: Jean-Paul Von Doehren Environmental Health Investigations,Inc. 655 West Shore Trail Sparta, NJ 07871

Phone: (973) 729-5649 Fax: (973) 729-5649

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/16/2017. The results are tabulated on the attached data pages for the following client designated project:

Russo Development #0558-6896

The reference number for these samples is EMSL Order #011704809. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted. NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

EMSL	EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ Phone/Fax: (856) 303-2500 / (856) 85 http://www.EMSL.com	I 08077 8-4571 <u>:nvChemistry2@emsl.com</u>			EMSL Order: CustomerID: CustomerPO: ProjectID:	011704809 EHII50
Attn: Jean-Pau Environm 655 West Sparta, N	I Von Doehren ental Health Investigation Shore Trail J 07871	is,Inc.	Phone: Fax: Received:	(973) 729-5649 (973) 729-5649 06/16/17 9:00 AN	1	
Project: Russo De	velopment #0558-6896					j

		Analytical R	esult	S				
Client Sample Des	cription RDV-061517-01		Colle	cted:	6/15/2017	Lab ID:	011704809	9-0001
Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 cn	n² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 cn	n² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1254	1.0	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1262	3.4	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 cn	n ² 6/20/2017	SD	6/20/2017	EH
Client Sample Des	cription RDV-061517-02		Colle	cted:	6/15/2017	Lab ID:	011704809	-0002

Prep Analysis Parameter RL Units Method Result Date Analyst Date Analyst 3550C/8082A Aroclor-1016 ND 0.50 µg/100 cm² 6/20/2017 SD 6/21/2017 EΗ 0.50 µg/100 cm² ND 6/20/2017 SD 6/21/2017 EΗ 3550C/8082A Aroclor-1221 ND 0.50 µg/100 cm² 6/20/2017 SD 6/21/2017 EΗ 3550C/8082A Aroclor-1232 ND 0.50 µg/100 cm² 6/20/2017 SD 6/21/2017 EΗ 3550C/8082A Aroclor-1242 ND 0.50 µg/100 cm² 6/20/2017 SD 6/21/2017 EΗ 3550C/8082A Aroclor-1248 0.79 0.50 µg/100 cm² 3550C/8082A Aroclor-1254 6/20/2017 SD 6/21/2017 EΗ ND 0.50 µg/100 cm² 6/20/2017 SD 6/21/2017 ΕH 3550C/8082A Aroclor-1260 2.3 0.50 µg/100 cm² 6/20/2017 3550C/8082A Aroclor-1262 SD 6/21/2017 EΗ ND 0.50 µg/100 cm² 6/20/2017 SD 6/21/2017 EΗ 3550C/8082A Aroclor-1268

Client Sample Description

RDV-061517-03

Collected: 6/15/2017 011704809-0003

Lab ID:

					Prep		Analysis	
Method	Parameter	Result	RL	Units	Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1248	0.66	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1254	1.1	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1262	1.2	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1268	1.1	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH

EMSL	EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ Phone/Fax: (856) 303-2500 / (856) 85 http://www.EMSL.com	J 08077 i8-4571 <u>invChemistry2@emsl.com</u>			EMSL Order: CustomerID: CustomerPO: ProjectID:	011704809 EHII50
Attn: Jean-Pau Environm 655 West Sparta, N	I Von Doehren Iental Health Investigation Shore Trail J 07871	ıs,Inc.	Phone: Fax: Received:	(973) 729-5649 (973) 729-5649 06/16/17 9:00 AN	1	
Project: Russo De	velopment #0558-6896					j

		Analytical R	esult	S				
Client Sample Des	cription RDV-061517-04		Colle	cted: 6	/15/2017	Lab ID:	011704809	-0004
Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1248	2.8	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1254	4.1	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1262	3.7	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1268	3.8	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
Client Sample Des	cription RDV-061517-05		Colle	cted: 6	/15/2017	Lab ID:	011704809	-0005

Client Sample Description RDV-061517-05

Collected: 6/15/2017

Method	Parameter	Result	RL	Units	Prep Date	Analvst	Analysis Date	Analvst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1248	3.0	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1254	3.3	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1262	4.9	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1268	3.8	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH

Client Sample Description RDV-061517-06

Collected: 6/15/2017 011704809-0006

Lab ID:

					Prep		Analysis	
Method	Parameter	Result	RL	Units	Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1248	2.9	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1254	4.3	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1262	4.8	0.50	µg/100 cm²	6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1268	6.7	0.50	µg/100 cm ²	6/20/2017	SD	6/21/2017	EH



_		Analytical Re	esults				
Client Sample De	scription RDV-061517-07		Collected:	6/15/2017	Lab ID:	011704809)-0007
Method	Parameter	Result	RL Units	Prep Date	Analyst	Analysis Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1254	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1262	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50 µg/wipe	e 6/20/2017	SD	6/21/2017	EH

Definitions:

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

	-	2			4	Т		-	-			-			2 m			-	1	Ø
	Dehen	W Zip/Postal Code: 0787		ere Samples Collected: MJ,	e):		v-846 Comments	ACB Dust Wines					2	Date & Time	10/12/17 12451	0-15-17	er	1 1	20.60 U/alla) can per depar
Bill To Company: EHZ Zi, C.	Attention To: Jean Paul VenD	City: Sharta State/Province:	Phone: 973-729-5649 Fax:	Won do Chren Ochithescon U.S. State whe	Order: Sampled By (Signature to lab approval: W 1 Week 1 4 Davs 3 2	List Test(s) Needed	Extraction Muthed 3550B SI	X						Received By	Churcher	Merrie 8:202	uced Deliverables 📙 Disk Deliverable 📃 Othe	01 808 M	Deuld Un Lev 4.C	in Area: 10cm ×10
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EMSL ANALYTICAL, INC. 200 ROUTE 130 NORTH CINNAMINSON, NJ 08077 PHONE: (800) 220-3675 FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

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Controlled Document – Environmental Chemistry COC – R5 – 8/12/2014

	ENVIRONM	BULK SAMPLE DATA FORM ENTAL HEALTH INVESTIGATIONS, INC. 655 WEST SHORE TRAIL SPARTA, NJ 07871	809
Client:	Russo Develop	hand Project #: 0558 - 6	896
Location:	450-490 South A	ve - Garwood, NJ.	
Date Collecte Collected By:	d: 6/15/17 JPV JKW		
Sample #	Type of Material	Location	
RDV- DEIST	7 Mipe Sample	Area 5 - TopSide of Beam West Side of Mezz.	PCB wipe
-0-	a Wipe Sample	Area 5 - Topside of I-Beam East side of Mezz.	
-03	, Wipe Sample	Area 5 - Top Side of Beam Flange West Side of Open Area.	
0 -04	Wipe Sample	Area 5 - Tap Side of Beam Joint Plate Center of Open Area above Loading Dack PH	
-05	Wipe Sampse	Area 5 - Top Side of Beam Joint Plate East Side of Open Area.	
-06	wipe Sample	Area 5- Duplitude of Sample # 4	
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A P P E N D I X

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Sample Location Drawing





	PCB DUST WIPE SAMPLING	DRAWING NO.
EHI Pro Date: J	AREA 5 - STEEL ROOF STRUCTURE ject #: 0558-6896 JNE 28, 2017	AREA 5
PREPA	RED BY:	SITE LOCATION:
E	Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871 493.729.5649 www.ehi-Inc.com	450 - 490 SOUTH AVE. GARWOOD, NJ



655 West Shore Trail Sparta, New Jersey 07871 Phone/Fax: 973-729-5649 www.ehi-inc.com

June 29, 2017

Email: erusso@russodevelopment.com

Mr. Ed Russo Russo Development 570 Commerce Blvd. Carlstadt, NJ 07072

Re: PCB Dust Wipe Sampling Former Alcoa Site, 450 - 490 South Ave. - "Areas 1 -3" Garwood, NJ EHI Project #: 0558-6897

Dear Mr. Russo:

Attached is our report relevant to the PCB dust wipe sampling conducted at the former Alcoa Site located at 450-490 South Avenue in Garwood, New Jersey.

Thank you for the opportunity to provide our services. Should you have any questions, please do not hesitate to contact me.

Very truly yours,

Jean-Paul von Doehren Senior Project Manager



655 West Shore Trail Sparta, New Jersey 07871 Phone/Fax: 973-729-5649 www.ehi-inc.com

REPORT OF FINDINGS

PCB Dust Wipe Sampling

At:

"Areas 1 -3" 450-490 South Ave. Garwood, NJ

On Behalf Of:

Russo Development 570 Commerce Boulevard Carlstadt, NJ 07072

Survey Conducted: June 15, 2017

Report Dated: June 29, 2017

EHI Project #: 0558-6897

1.0 Introduction

Environmental Health Investigations, Inc. was retained by Russo Development to conduct a dust wipe sampling for the presence of Polychlorinated Biphenyls (PCBs) inside the former Alcoa structure located at 450-490 South Avenue in Garwood, New Jersey.

The survey was conducted by Mr. Jean-Paul von Doehren and Ms. Jill K. Wack of EHI on June 15, 2017.

2.0 Methods & Observations:

The wipe sampling was performed at the request of the US-EPA to determine the extent of PCB contamination in the settled dust on the structural steel building components in the areas defined as "Areas 1, 2 & 3" of the facility. By design, no samples were collected in Area 5. Area 4 did not appear to have a structural steel build style, therefore no samples were collected. An attached drawing located in *Appendix B* helps define all the "Areas" and further delineates the sample locations.

All dust wipe samples were collected and analyzed in accordance with the SW-846 Compendium (extraction via method 3550 and analysis via method 8082), the method in accordance with the Toxic Substances Control Act (TSCA) as administered by the US-EPA.

In order to collect the dust wipe samples, EHI utilized a combination of working from ground level, ladders and a 40' articulating man lift to access the varying steel structural components of Areas 1, 2 & 3. Samples were collected from the vertical facing of the structural steel building components.

Once areas were selected for sampling, EHI utilized a 10 centimeter by 10 centimeter (100

Areas 1 - 3: PCB Dust Wipe Sampling June 15, 2017 EHI Project #:0558-6897

cm²) template to delineate the sampling area. With the template in place, a 3 inch by 3 inch piece of gauze was wetted with a ratio 1:4 Acetone/Hexane mixture and EHI wiped the area. Standardized dust wipe collecting techniques were utilized to ascertain a complete picture of PCB contamination in the dust. This includes wiping north/south, folding over the gauze, then wiping east/west, folding the gauze again and wiping around all 4 corners. EHI also utilized a new set of rubber/latex gloves for the collection of each sample to avoid cross contamination. Once the area was wiped, EHI placed the gauze into a 2 ounce glass jar identifying the sample with a unique number.

One blank and duplicate wipe sample was also be submitted for analysis. The duplicate sample was collected from a spot adjacent to an initial sample. The blank sample was submitted without collecting any dust/particulate. Blank and duplicate samples are designed to provide a quality control for the field sampling personnel as well as the laboratory analysis personnel.

All collected wipe samples were placed along with ice packs inside a cooler and submitted to EMSL Analytical, Inc. located at 200 Rt. 130 North in Cinnaminson, New Jersey.

3.0 Summary of PCB Wipe Sample Results

A summary of the results for the analyses of the wipe samples collected as part of the project is provided below. *Appendix A* of this report contains a copy of the laboratory analytical report from EMSL Analytical, Inc.

According the US-EPA, *PCB-contaminated* is defined as a non-porous surface having a PCB surface concentration greater than 10 micrograms per 100 square centimeters and less than 100 micrograms per 100 square centimeters (> $10\mu g/100cm^2$ and < $100\mu g/100cm^2$). Samples with concentrations of PCBs in excess of $10\mu g/100cm^2$ are emboldened in the table below.

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-1A	Area 2 - on Beam Connection Plate	Aroclor-1016	ND
		ParameterR GConnection PlateAroclor-1016NAroclor-1221NAroclor-1221NAroclor-1242NAroclor-12480Aroclor-12480Aroclor-12541Aroclor-1260NAroclor-12621Aroclor-1268NAroclor-1268NAroclor-1268NAroclor-1221NAroclor-1221NAroclor-1221NAroclor-1248NAroclor-1248NAroclor-1248NAroclor-1254NAroclor-1260NAroclor-1260NAroclor-1260NAroclor-1263NAroclor-1264NAroclor-1263NAroclor-1264NAroclor-1268NAr	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	0.90
		Aroclor-1254	1.2
		Aroclor-1260	ND
		Aroclor-1262	1.0
		Aroclor-1268	ND
RDV-061517-2A	Area 3 - Center of Area on Beam Facing	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	ND
		Aroclor-1260	ND
		Aroclor-1262	0.83
		Aroclor-1268	ND
RDV-061517-3A	Area 2 - Center North Section on Beam Facing	Aroclor-1016	ND
	along Ceiling	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	3.2
		Aroclor-1260	3.1
		Aroclor-1262	ND
		Aroclor-1268	ND

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-4A	Area 3 - North East Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	ND
		Aroclor-1260	ND
		Aroclor-1262	0.77
		Aroclor-1268	ND
RDV-061517-5A	Area 2 - North East Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	1.7
		Aroclor-1254	2.6
		Aroclor-1260	2.6
		Aroclor-1262	ND
		Aroclor-1268	ND
RDV-061517-6A	Area 2 - Center South Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	58
		Aroclor-1260	47
		Aroclor-1262	ND
		Aroclor-1268	ND

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-7A	DUPLICATE	Aroclor-1016	ND
	to Sample 6A	Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	58
		Aroclor-1260	33
		Aroclor-1262	ND
		Aroclor-1268	ND
RDV-061517-8A	Area 2 - Center North Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
	Aroclor-1242	ND	
	Aroclor-1248	ND	
		Aroclor-1254	0.59
		Aroclor-1260	ND
		Aroclor-1262	0.69
		Aroclor-1268	ND
RDV-061517-9A	Area 2 - North West Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	1.2
		Aroclor-1254	3.0
		Aroclor-1260	ND
		Aroclor-1262	6.3
		Aroclor-1268	2.6

Sample #:	Location:	Parameter	Result (µg/100 cm ²)
RDV-061517-10A	Area 1 - North West Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	ND
		Aroclor-1260	ND
		Aroclor-1262	ND
		Aroclor-1268	10
RDV-061517-11A	Area 1 - North East Section on Steel Column	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	0.93
		Aroclor-1260	ND
		Aroclor-1262	ND
		Aroclor-1268	16
RDV-061517-12A	Blank	Aroclor-1016	ND
		Aroclor-1221	ND
		Aroclor-1232	ND
		Aroclor-1242	ND
		Aroclor-1248	ND
		Aroclor-1254	ND
		Aroclor-1260	ND
		Aroclor-1262	ND
		Aroclor-1268	ND
ND - indicates that the RL (Reporting Limit	the analyte was not detected at the reporting limit (RL) $) = 0.5 \ \mu g/100 \ cm^2$		

Areas 1 - 3: PCB Dust Wipe Sampling June 15, 2017 EHI Project #:0558-6897

4.0 Conclusion:

The wipe sampling of settled dust/particulate from the structural steel system in Areas 1, 2 & 3 of the former Alcoa Site located at 450-490 South Avenue in Garwood, New Jersey yielded laboratory results that indicate PCB contamination as defined by the US-EPA. Four (4) collected wipe samples were found to have total PCB concentration above $10 \mu g/100 \text{ cm}^2$. The four samples were collected from three (3) locations, since one of the four samples was a duplicate. Below is summary of the locations where the PCB contaminated wipe samples were collected:

- Area 2 Center South on Steel Column (including Duplicate)
- Area 2 North West Section on Steel Column
- Area 1 North East End on Steel Column

Sample # RDV-061517-11A was found to have a PCB contamination level of 10 µg/100

cm². Although technically not greater than $10 \,\mu g/100 \,\text{cm}^2$ the following sample location should also be considered when formulating a remediation plan:

• Area 1 - North West End on Steel Column

Sampling By:

Jean-Paul von Doehren Jill K. Wack

Report By:

Reviewed By:

Jean-Paul von Doehren

Jean-Paul von Doehren Senior Project Manager

William S. Kerbel

William S. Kerbel, CIH President

Areas 1 - 3: PCB Dust Wipe Sampling June 15, 2017 EHI Project #:0558-6897

A P P E N D I X

Α

EMSL Analytical, Inc. - PCB Wipe Sample Results



EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08077 Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

6/23/2017

Attn: Jean-Paul Von Doehren Environmental Health Investigations,Inc. 655 West Shore Trail Sparta, NJ 07871

Phone: (973) 729-5649 Fax: (973) 729-5649

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/16/2017. The results are tabulated on the attached data pages for the following client designated project:

Russo Development #0558-6897

The reference number for these samples is EMSL Order #011704812. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted. NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.



Attn:	Jean-Paul Von Doehren
	Environmental Health Investigations, Inc.
	655 West Shore Trail
	Sparta, NJ 07871

Phone: Fax: Received: (973) 729-5649 (973) 729-5649 06/16/17 9:00 AM

Project: Russo Development #0558-6897

		Analytical F	Result	S				
Client Sample Des	cription RDV-061517-1A	ection Plate	Colle	cted:	6/15/2017	Lab ID:	011704812	2-0001
Method	Parameter	Result	RI	linite	Prep	Analyst	Analysis Date	Analyst
25500/20224	Araclar 1016	ND	0.50		m ² 6/22/2017	SD	6/22/2017	FH
3550C/8082A	Aroclor-1221	ND	0.50	ug/100 ci	m ² 6/22/2017	SD	6/22/2017	FH
3550C/8082A	Aroclor-1221	ND	0.50	ug/100 ci	$m^2 = 6/22/2017$	SD	6/22/2017	FH
3550C/8082A	Aroclor-1232	ND	0.50	ug/100 c	m ² 6/22/2017	SD	6/22/2017	FH
3550C/8082A	Aroclor-1248	0.90	0.50	ug/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	1.2	0.50	ua/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	1.0	0.50	ua/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
Client Sample Des	cription RDV-061517-2A		Colle	cted:	6/15/2017	Lab ID:	011704812	2-0002
	Area 3 - On Beam Facir	ng Center of Area						
					Prep		Analysis	
Method	Parameter	Result	RL	Units	Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	0.83	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
Client Sample Des	cription RDV-061517-3A Area 2 - On Beam Face Center North Section	Along Ceiling -	Colle	ected:	6/15/2017 Pren	Lab ID:	011704812 Analysis	2-0003
Method	Parameter	Result	RL	Units	Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	3.2	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	3.1	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 c	m ² 6/22/2017	SD	6/22/2017	EH



Attn: **Jean-Paul Von Doehren** Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871

Phone: Fax: Received: (973) 729-5649 (973) 729-5649 06/16/17 9:00 AM

Project: Russo Development #0558-6897

		Analytical R	Result	S					
Client Sample Des	cription RDV-061517-4A		Colle	cted:	6/15/2	2017	Lab ID:	011704812	2-0004
	Area 3 - On Steel Colu	mn - NE Section							
Method	Parameter	Result	RL	Units		Prep Date	Analyst	Analysis Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	0.77	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
Client Sample Des	cription RDV-061517-5A		Colle	cted:	6/15/2	2017	Lab ID:	011704812	2-0005
	Area 2 - On Steel Colu	mn - NE Section							
						Prep		Analysis	
Method	Parameter	Result	RL	Units		Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	1.7	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	2.6	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	2.6	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 c	m²	6/22/2017	SD	6/22/2017	EH
Client Sample Des	<i>cription</i> RDV-061517-6A Area 2 - On Steel Colu Section	mn - Center South	Colle	cted:	6/15/2	2017 Prep	Lab ID:	011704812 Analvsis	2-0006
Method	Parameter	Result	RL	Units		Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1221	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1232	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1242	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1248	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1254	58	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1260	47	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1262	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1268	ND	10	µg/100 c	m²	6/22/2017	SD	6/23/2017	EH



Attn:

CustomerPO: ProjectID:

011704812

Phone: Fax: Environmental Health Investigations, Inc. Received:

(973) 729-5649 (973) 729-5649 06/16/17 9:00 AM

Project: Russo Development #0558-6897

655 West Shore Trail Sparta, NJ 07871

Jean-Paul Von Doehren

		Analytical F	Result	S					
Client Sample Des	cription RDV-061517-7A Area 2 - Duplicate of Sa	ample 6A	Colle	ected:	6/15/2	2017	Lab ID:	011704812	2-0007
Method	Parameter	Result	RL	Units		Prep Date	Analyst	Analysis Date	Analyst
3550C/8082A	Aroclor-1016	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1221	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1232	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1242	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1248	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1254	58	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1260	33	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1262	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1268	ND	5.0	µg/100 d	cm²	6/22/2017	SD	6/23/2017	EH
Client Sample Des	cription RDV-061517-8A		Colle	ected:	6/15/2	2017	Lab ID:	011704812	2-0008
	Area 2 - On Steel Colur Section	nn Center North							
	Section					Prep		Analysis	
Method	Parameter	Result	RL	Units		Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	0.59	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	0.69	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50	µg/100 d	cm²	6/22/2017	SD	6/22/2017	EH
Client Sample Des	cription RDV-061517-9A		Colle	ected:	6/15/2	2017	Lab ID:	011704812	2-0009
	Area 2 - On Steel Colur	nn NW Section							
	Davamatar	Decult		Unite		Prep Dete	Ameliat	Analysis	Amahuat
Wethod	Parameter	Result	RL				Analyst		Analyst
3550C/8082A	Aroclor-1016	ND	0.50	μg/100 0	2m2	6/22/2017	5D	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50	μg/100 0	2m2	6/22/2017	5D	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50	µg/100 c	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50	µg/100 c	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	1.2	0.50	µg/100 c	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	3.0	0.50	µg/100 c	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50	μg/100 α	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	6.3	0.50	µg/100 c	cm²	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	2.6	0.50	µg/100 d	cm ²	6/22/2017	SD	6/22/2017	EH



Attn:

Jean-Paul Von Doehren Environmental Health Investigations,Inc. 655 West Shore Trail Sparta, NJ 07871

Phone: Fax: Received: (973) 729-5649 (973) 729-5649 06/16/17 9:00 AM

Project: Russo Development #0558-6897

		Analytical F	Results					
Client Sample Description RDV-061517-10A			Collected: 6		6/15/2017	Lab ID:	011704812-0010	
	Area 1 - On Steel Colum	INW Section						
Method	Parameter	Result	RL (Units	Prep Date	Analyst	Analysis Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	10	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
Client Sample Des	cription RDV-061517-11A		Collec	ted:	6/15/2017	Lab ID:	011704812	2-0011
	Area 1 - On Steel Colum	in - NE End						
					Prep		Analysis	
Method	Parameter	Result	RL (Units	Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	0.93	0.50 µ	ug/100 cm	² 6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	1.0 µ	ug/100 cm	² 6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1262	ND	1.0 µ	ug/100 cm	² 6/22/2017	SD	6/23/2017	EH
3550C/8082A	Aroclor-1268	16	1.0 µ	ug/100 cm	² 6/22/2017	SD	6/23/2017	EH
Client Sample Des	cription RDV-061517-12A		Collec	ted:	6/15/2017	Lab ID:	011704812	2-0012
	Blank							
					Prep		Analysis	
Method	Parameter	Result	RL (Units	Date	Analyst	Date	Analyst
3550C/8082A	Aroclor-1016	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1221	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1232	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1242	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1248	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1254	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1260	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1262	ND	0.50 µ	ug/wipe	6/22/2017	SD	6/22/2017	EH
3550C/8082A	Aroclor-1268	ND	0.50 L	Ja/wipe	6/22/2017	SD	6/22/2017	EH



EMSL Analytical, Inc.

 200 Route 130 North, Cinnaminson, NJ 08077

 Phone/Fax:
 (856) 303-2500 / (856) 858-4571

 http://www.EMSL.com
 EnvChemistry2@emsl.com

EMSL Order: 011704812 CustomerID: EHII50 CustomerPO: ProjectID:

Definitions:

 $\rm ND$ - indicates that the analyte was not detected at the reporting limit RL - Reporting Limit (Analytical)

OrderID: 011704812

Page 1 Of



	Client:	BU ENVIRONMEN PHONE: Russo De Verlopmen	ULT 10 7072 JLK SAMPLE DATA FORM STAL HEALTH INVESTIGATIONS, INC. 655 WEST SHORE TRAIL SPARTA, NJ 07871 (973) 729-5649 FAX: (973) 729-5649 <u>J</u> Project #:0558-68	97	
	Location:	50-490 save A	flehve - Garwood Nor.		
	Date Collected:	6/15/17			
	Collected By:	SPV, JEW			
	Sample #	Type of Material	Location		
6	RDV-06151	7 Wipe	Area 2 -on Beam Connection	PCB	
0	-1A	Sample	Flate	Wipe	
0	-2A	Sample	Area 3 - on Beam Facely, Center of area.		
3	-3A	Wipe Sampre	Anea 2 - on Beam Facery along Ceiling - Cento North Section.		
(9)	-4A	wipe sample	Area 3 - on Column - NE Section		
3	-5A	wipe Sample	Area 2 - on Column - NE Section		
6	-6A	wipe Sample	Area 2 - on Column - Sento South Section		
Ð	~7A	Wipe Sample	Area 2 - Duplicate of Sample 6A		
8)-8A	wipe Samphe	Area 2- on Steel Column Center North Section		
9	~9A	wipe sampre	Area 2 - on steel columns NW section		
1	-10A	Wipe Sample	Area 1 - on steel column East end		
a	-11 A	wipe sample	Area 1 - on stell comme - NE End		
12	-12A	mipe sampre	RIAMK	1	

Areas 1 - 3: PCB Dust Wipe Sampling June 15, 2017 EHI Project #:0558-6897

A P P E N D I X

B

Sample Location Drawing





PCB DUST WIPE SAMPLING	DRAWING NO.
AREA 1, 2 & 3 - STEEL STRUCTURE EHI Project #: 0558-6897 Date: JUNE 28, 2017	AREAS 1, 2 & 3
PREPARED BY: Environmental Health Investigations, Inc. 655 West Shore Trail Sparta, NJ 07871 Tel. 973 729:5649 www.ehi-inc.com	<u>Site Location:</u> 450 - 490 South Ave. Garwood, NJ