APPENDIX C-2:
EVENT 2 LAB REPORTS

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Supplemental Report 1

Subcontract analyses are reported as a stand-alone report.

WORK ORDER NUMBER: 15-06-1223

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weston Solutions

Client Project Name: POLB/POLA Low Detection Limit Water Column Study Phase

Attention: Sheila Holt
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Approved for release on 07/29/2015 by:
Danielle Gonsman
Project Manager

ResultLink

Email your PM

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Client Project Name: POLB/POLA Low Detection Limit Water Column Study Phase
Work Order Number: 15-06-1223

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/15/15. They were assigned to Work Order 15-06-1223.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client: Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Work Order: 15-06-1223
Project Name: POLB/POLA Low Detection Limit Water Column Study Phase
PO Number:
Date/Time Received: 06/15/15 17:50
Number of Containers: 61

Attn: Sheila Holt

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
REF-RW-01-G-M-20150615	15-06-1223-1	06/15/15 07:30	4	Sea Water
SP-RW-01-G-M-20150615	15-06-1223-2	06/15/15 08:20	4	Sea Water
LARE-RW-01-G-M-20150615	15-06-1223-3	06/15/15 09:05	4	Sea Water
OB-RW-01-G-M-20150615	15-06-1223-4	06/15/15 09:50	4	Sea Water
OB-RW-01-G-B-20150615	15-06-1223-5	06/15/15 10:00	4	Sea Water
IB-RW-01-G-M-20150615	15-06-1223-6	06/15/15 10:40	10	Sea Water
IB-RW-01-G-B-20150615	15-06-1223-7	06/15/15 10:50	4	Sea Water
IB-RW-1001-G-M-20150615	15-06-1223-8	06/15/15 10:40	4	Sea Water
CS-RW-01-G-M-20150615	15-06-1223-9	06/15/15 12:10	4	Sea Water
CS-RW-01-G-B-20150615	15-06-1223-10	06/15/15 12:20	4	Sea Water
IA-RW-01-G-M-20150615	15-06-1223-11	06/15/15 12:55	4	Sea Water
FH-RW-01-G-M-20150615	15-06-1223-12	06/15/15 13:45	4	Sea Water
CP-RW-01-G-M-20150615	15-06-1223-13	06/15/15 14:20	4	Sea Water
EB-20150615	15-06-1223-14	06/15/15 15:20	3	Sea Water

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Analytical Report

Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Date Received: 06/15/15
Work Order: 15-06-1223
Preparation: N/A
Method: SM 2540 D
Units: mg/L

Project: POLB/POLA Low Detection Limit Water Column Study Phase

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
REF-RW-01-G-M-20150615	**15-06-1223-1-C**	**06/15/15 07:30**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-RW-01-G-M-20150615	**15-06-1223-2-C**	**06/15/15 08:20**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	1.2	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LARE-RW-01-G-M-20150615	**15-06-1223-3-C**	**06/15/15 09:05**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	4.8	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OB-RW-01-G-M-20150615	**15-06-1223-4-C**	**06/15/15 09:50**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OB-RW-01-G-B-20150615	**15-06-1223-5-C**	**06/15/15 10:00**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	1.2	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-RW-01-G-M-20150615	**15-06-1223-6-C**	**06/15/15 10:40**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-RW-01-G-B-20150615	**15-06-1223-7-C**	**06/15/15 10:50**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.8	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-RW-1001-G-M-20150615	**15-06-1223-8-C**	**06/15/15 10:40**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	1.2	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Date Received: 06/15/15
Work Order: 15-06-1223
Preparation: N/A
Method: SM 2540 D
Units: mg/L

Project: POLB/POLA Low Detection Limit Water Column Study Phase

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-RW-01-G-M-20150615	**15-06-1223-9-C**	**06/15/15 12:10**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.4	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-RW-01-G-B-20150615	**15-06-1223-10-C**	**06/15/15 12:20**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.2	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-RW-01-G-M-20150615	**15-06-1223-11-C**	**06/15/15 12:55**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	3.3	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-RW-01-G-M-20150615	**15-06-1223-12-C**	**06/15/15 13:45**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	4.0	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CP-RW-01-G-M-20150615	**15-06-1223-13-C**	**06/15/15 14:20**	**Sea Water**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	12	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-09-010-7208**	**N/A**	**Aqueous**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Sample Duplicate

Weston Solutions		Date Received:	06/15/15
5817 Dryden Place, Suite 101		Work Order:	15-06-1223
Carlsbad, CA 92008-9999		Preparation:	N/A
		Method:	SM 2540 D
Project: POLB/POLA Low Detection Limit Water Column Study Phase			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-RW-01-G-M-20150615	**Sample**	**Sea Water**	**N/A**	**06/19/15 00:00**	**06/19/15 16:00**	**F0619TSSD1**
IB-RW-01-G-M-20150615	**Sample Duplicate**	**Sea Water**	**N/A**	**06/19/15 00:00**	**06/19/15 16:00**	**F0619TSSD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total Suspended	ND	ND	N/A	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Weston Solutions	Date Received: 06/15/15
5817 Dryden Place, Suite 101	Work Order: 15-06-1223
Carlsbad, CA 92008-9999	Preparation: N/A
	Method: SM 2540 D
Project: POLB/POLA Low Detection Limit Water Column Study Phase	Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-010-7208	**LCS**	**Aqueous**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**
099-09-010-7208	**LCSD**	**Aqueous**	**N/A**	**06/19/15**	**06/19/15 16:00**	**F0619TSSL1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Solids, Total Suspended	100.0	98.00	98	107.0	107	80-120	9	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

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Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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WESTON SOLUTIONS

☒ 5817 Dryden Place, Ste 101 • Carlsbad, CA 92008 • (760) 795-6900, FAX 931-1580
☐ 1340 Treat Blvd, Ste 210 • Walnut Creek, CA 94597 • (925) 948-2600, FAX 948-2601

CHAIN OF CUSTODY

37168

DATE 15 JUN 2015 PAGE 1 OF 1

PROJECT NAME / SURVEY / PROJECT NUMBER: POLA / POLB LOW DETECTION LIMIT WATER COLUMN STUDY PHASE

PROJECT MANAGER / CONTACT: SHEILA HOLT

CLIENT: WESTON SOLUTIONS

ADDRESS: SEE ABOVE

PHONE / FAX / EMAIL: " "

FOR WESTON USE ONLY: 15-06-1223

SITE ID (Location)	SAMPLE ID	DATE	TIME	MATRIX	CONTAINER TYPE / VOLUME	TOTAL NUMBER OF CONTAINER	TOC	DOC	POC	TSS					PRESERVED HOW	SAMPLE TEMP. (°C) UPON RECEIPT	WESTON LAB ID
	REF-RW-01-G-M-20150615	6.15.15	0730	SLT	P+G various	4	X	X	X	X					ice/H2SO4		1
	SP-RW-01-G-M-20150615		0820														2
	LARE-RW-01-G-M-20150615		0905														3
	OB-RW-01-G-M-20150615		0950														4
	OB-RW-01-G-B-20150615		1000														5
	IB-RW-01-G-M-20150615		1040			10*											6
	IB-RW-01-G-B-20150615		1050			4											7
	IB-RW-1001-G-M-20150615		1040														8
	CS-RW-01-G-M-20150615		1210														9
	CS-RW-01-G-B-20150615		1220														10
	IA-RW-01-G-M-20150615		1255														11
	FH-RW-01-G-M-20150615		1345														12
	CP-RW-01-G-M-20150615		1420														13
	~~EB-RW-01~~ EB-20150615		1520			3											14

Sample Matrix Codes: FW= fresh water GW=ground water SLT=salt water SW=storm water WW=waste water SED=sediment A=air BIO=biologic SS=soil T=tissue O=other (specify) ____

Container Code: G=glass P=plastic B=bags ☐ O=other ____

Shipped By: ☐ Courier ☐ UPS ☐ FedEx ☐ USPS ☐ Client drop off ☐ Other ____

Turnaround Time: ☐ 2-day ☐ 5-day ☐ 7-day ☐ 10-day ☐ 14-day ☐ Standard ☐ Other ____

Reporting Requirements: ☐ PDF ☐ EDD ☐ Hard Copy ☐ Email ☐ Other ____

SAMPLED BY: PRINT: Damon Oneal; Nick Cochran SIGNATURE: [signature]

COMMENTS / SPECIAL INSTRUCTIONS: * IB-RW-01-G-M-20150615 - extra volume for MS/MSD + Lab Rep.
DOC + POC will be filtered @ Envofuss prior to shipping to MST

RELINQUISHED BY				RECEIVED BY			
Print Name	Signature	Firm	Date/Time	Print Name	Signature	Firm	Date/Time
1. Nick Cochran	[signature]	Weston	6-15-15 1750	PRECY SORIANO	[signature]	ECL	6/15/15 1750
2.							
3.							
4.							
5.							
6.							

WHITE – return to originator • YELLOW – lab • PINK – retained by originator

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Location	Sample ID*	Depth Targeted	Analytical Lab and Analyses
Consolidated Slip	CS-RW-01-G-M-201501DD	Mid-Depth	Marine Science Institute: TOC, DOC, POC Eurofins: TSS (Eurofins will receive 4 bottles total per sample excluding QA bottles. Eurofins will ship designated samples to MSI.) DOC and POC will be filtered by Eurofins prior to sending to MSI
Consolidated Slip	CS-RW-01-G-B-201501DD	Bottom	
Long Beach Outer Harbor	OB-RW-01-G-M-201501DD	Mid-Depth	
Long Beach Outer Harbor	OB-RW-01-G-B-201501DD	Bottom	
Reference Station	REF-RW-01-G-M-201501DD	Mid-Depth	
Los Angeles River Estuary	LARE-RW-01-G-M-201501DD	Mid-Depth	
Eastern San Pedro Bay	SP-RW-01-G-M-201501DD	Mid-Depth	
Cabrillo Pier vicinity	CP-RW-01-G-M-201501DD	Mid-Depth	
LA Inner Harbor	IA-RW-01-G-M-201501DD	Mid-Depth	
LB Inner Harbor	IB-RW-01-G-M-201501DD	Mid-Depth	
LB Inner Harbor	IB-RW-01-G-B-201501DD	Bottom	
Fish Harbor	FH-RW-01-G-M-201501DD	Mid-Depth	
TBD	Field Duplicate (sample TBD)	TBD	Marine Science Institute: TOC, DOC, POC Eurofins: TSS (Eurofins will receive 4 bottles total excluding QA bottles. Eurofins will ship designated samples to MSI.)
	Equipment Rinse Blank		Marine Science Institute: TOC, DOC, POC (Eurofins will ship 3 samples to MSI.)

*DD = Day of sample collection; To be determined

QA samples: See QA tab in this excel file. Refer to analyses highlighted in yellow.
QA samples apply to all samples run by Eurofins and Marine Science Institute

Duplicate	IB-RW-1001-G-M-201501XX	Mid-Depth	You will need to fill out DAY on Sample ID, Date, and Time
MS/MSD & Lap Rep	XX-RW-01-G-X-201501XX		You will need to fill out Location, Depth, Day on Sample ID, Date, and Time

QA Water TOC 2 bottles, DOC 2 bottles, POC 1 bottle, and TSS 1 bottle
Bottle Key: POC 1L amber, DOC 250ml amber, TOC 250ml clear, and TSS 1L HDPE

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Table 6. Laboratory Quality Assurance/Quality Control Analysis Summary
Ports of Los Angeles and Long Beach
San Pedro and Long Beach, California

1223

Analysis Type	Initial Calibration [1,2]	Continuing Calibration Verification	LCS or SRM [3]	Replicates	Matrix Spikes	Matrix Spike Duplicates	Method Blanks	Surrogate Spikes	Internal Standard
Total solids	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
Particle size	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
TSS	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
TOC/DOC	As needed	1 per 10 analytical runs	1 per 20 samples or 1 per batch	NA	1 per 20 samples or 1 per batch	1 per 20 samples or 1 per batch	Each batch	NA	NA
POC	Daily or each batch	1 per 16 samples	1 per 20 samples	1 per 20 samples	NA	NA	Each batch	NA	NA
PCB congeners by high-resolution method	As needed	Every 12 hours	1 per 20 samples	NA	NA4	NA4	1 per 20 samples	NA [4]	Every sample
Organochlorine pesticides by high-resolution method	As needed	Every 12 hours	1 per 20 samples	NA	NA4	NA4	1 per 20 samples	NA [4]	Every sample

Notes:
1.) For physical tests, calibration and certification of drying ovens and weighing scales are conducted annually.
2.) Calibrations should be conducted per analytical methods or instrument manufacturers specifications.
3.) When SRM is not available, a LCS will be analyzed.
4.) Isotope dilution quantitation technique accounts for matrix interferences; thus, matrix spike/matrix spike duplicate are not required.
5.) Values should have relative percent differences less than 40 percent or they are P flagged. ICALS = 20 percent or less and CCALS = 15 percent or less.
6.) Abbreviations:

DOC = dissolved organic carbon
LCS = Laboratory control sample
NA = not applicable
PCB = polychlorinated biphenyl
POC = particulate organic carbon
SRM = standard reference material
TOC = total organic carbon
TSS = total suspended solids

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WORK ORDER NUMBER: 15-06- 1223

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 3

CLIENT: Weston

DATE: 06 / 15 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 2 - 6 °C (w/ CF): 2 - 3 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 836

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: **(Trip Blank Lot Number: _____)**

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☑ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☑ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, Labeled/Checked by: 836

s = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH Reviewed by: 689

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WORK ORDER NUMBER: 15-06- 1223

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 3

CLIENT: Weston

DATE: 06 / 15 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 2-8 °C (w/ CF): 2-5 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 836

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☑ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☑ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 836

Reviewed by: 836

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WORK ORDER NUMBER: 15-06- 1223

SAMPLE RECEIPT CHECKLIST

COOLER 3 OF 3

CLIENT: Weston

DATE: 06 / 15 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 2.7 °C (w/ CF): 2.4 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 836

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznna ☑ 250AGB ☐ 250CGB ☑ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☑ 1AGB ☐ 1AGBna_2 ☐ 1AGBs ☑ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 836

Reviewed by: 659

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Subcontractor Analysis Report

Work Order: 15-06-1223 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Marine Science Institute - Santa Barbara,CA
   Particulate Organic Carbon, EPA 440 - CHN
   Total and Dissolved Organic Carbon

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ANALYSIS	Sample ID	µmol C/L	Std Dev.	µg C/L
DOC	BLK	6.29	0.42	75.57
DOC	EB-20150615 DOC	12.52	0.75	150.43
DOC	REF-RW-01-G-M-20150615 DOC	86.74	0.13	1041.82
DOC	LARE-RW-01-G-M-20150615 DOC	152.04	1.50	1826.11
DOC	CP-RW-01-G-M-20150615 DOC	79.94	1.24	960.11
DOC	OB-RW-01-G-B-20150615 DOC	85.15	0.23	1022.66
DOC	OB-RW-01-G-M-20150615 DOC	82.57	1.25	991.76
DOC	FH-RW-01-G-M-20150615 DOC	86.86	0.78	1043.19
DOC	SP-RW-01-G-M-20150615 DOC	94.32	1.45	1132.84
DOC	CS-RW-01-G-B-20150615 DOC	89.45	1.45	1074.33
DOC	CS-RW-01-G-M-20150615 DOC	97.00	1.57	1165.01
DOC	IA-RW-01-G-M-20150615 DOC	79.36	0.52	953.16
DOC	IB-RW-1001-G-M-20150615 DOC	94.23	0.52	1131.82
DOC	IB-RW-01-G-B-20150615 DOC	82.30	0.50	988.44
DOC	IB-RW-01-G-M-20150615 DOC	86.51	1.16	1039.08
DOC	IB-RW-01-G-M-20150615 MSD DOC	87.14	1.02	1046.61
DOC	IB-RW-01-G-M-20150615 MSD DOC	534.86	4.10	6424.05
TOC	EB-20150615	38.58	0.36	463.32
TOC	REF-RW-01-G-M-20150615	117.66	0.43	1413.22
TOC	LARE-RW-01-G-M-20150615	245.50	4.10	2948.61
TOC	CP-RW-01-G-M-20150615	114.87	0.39	1379.69
TOC	OB-RW-01-G-M-20150615	130.80	0.92	1570.97
TOC	OB-RW-01-G-B-20150615	124.42	0.47	1494.32
TOC	FH-RW-01-G-M-20150615	143.53	2.00	1723.93
TOC	SP-RW-01-G-M-20150615	128.06	1.29	1538.12
TOC	CS-RW-01-G-B-20150615	123.65	0.78	1485.08
TOC	CS-RW-01-G-M-20150615	137.61	0.89	1652.75
TOC	IA-RW-01-G-M-20150615	119.09	1.27	1430.33
TOC	IB-RW-1001-G-M-20150615	119.49	0.23	1435.12
TOC	IB-RW-01-G-B-20150615	120.11	2.05	1442.65
TOC	IB-RW-01-G-M-20150615	120.85	0.52	1451.55
TOC	IB-RW-01-G-M-20150615 MSD	523.39	3.76	6286.28
TOC	IB-RW-01-G-M-20150615 MSD	423.76	2.16	5089.66

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Std Dev.
5.03
8.98
1.57
17.97
14.92
2.72
15.07
9.41
17.46
17.46
18.83
6.19
6.27
6.06
13.89
12.25
49.29
4.33
5.17
49.29
4.70
11.07
5.65
23.97
15.44
9.31
10.72
15.24
2.72
24.64
6.24
45.15
25.91

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Sample Batch: Gonsman		AL4909	Run Date:	17-Jul-15
Sample ID	Micrograms		C/N ratio	Flags
	C	N		
REF-RW-01-G-M-20150615	294	52.5	5.61	
SP-RW-01-G-M-20150615	368	65.3	5.64	
LARE-RW-01-G-M-20150615	371	84.3	4.40	
OB-RW-01-G-M-20150615	445	88.4	5.04	
OB-RW-01-G-B-20150615	404	80.9	4.99	
IB-RW-01-G-M-20150615	328	67.2	4.88	
IB-RW-01-G-M-20150615 rep	302	60.8	4.96	
IB-RW-01-G-B-20150615	314	65.7	4.79	
IB-RW-1001-G-M-20150615	146	31.4	4.66	
CS-RW-01-G-M-20150615	430	84.5	5.09	
CS-RW-01-G-B-20150615	23.1	5.62	4.11	N<DL
IA-RW-01-G-M-20150615	247	48.7	5.07	
FH-RW-01-G-M-20150615	676	123	5.51	
CP-RW-01-G-M-20150615	30.7	4.01	7.65	N<DL
EB-20150615	22.5	-0.27	-84.0	N<DL
Filter Blank	15.5	4.28	3.62	N<DL

	C	N
Detection Limit (µg)	0.8	5.9

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DL calc

	R-Z	Avg K	DL ug
Carbon	17	20.62	**0.83**
Hydrogen	179	58.90	**3.04**
Nitrogen	43	7.28	**5.86**

Blanks and spacers	BC	BH	BN
	30	161	90
	23	270	55
	25	194	75
	34	235	73
	24	344	59
	37	272	51
	23	221	79
Stdev =	6	60	14
3*stdev =	17	179	43
Average =	28	242	69

Standards	KC	KH	KN
	20.72	61.58	7.25
	20.68	61.44	7.30
	20.64	61.52	7.12
	20.65	57.96	7.32
	20.55	56.14	7.48
	20.49	54.78	7.22
Mean =	20.62	58.90	7.28

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July 16, 2015

Vista Project I.D.: 1500540

Dr. David Moore
Ramboll Environ
18100 Von Karman Ave. Suite 600
Irvine, CA 92612

Dear Dr. Moore,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on June 16, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name 'POLA/POLB LDL Study'. The work was authorized under your Purchase Order No. 04 33310A11.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1500540
Case Narrative

Sample Condition on Receipt:

Ten SPME samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. This report was amended to include the vial weights, which were omitted from the original report.

Analytical Notes:

Upon receipt, each vial was weighed and hexane was added to each vial, covering the SPME. A table containing the initial and final weights is included with the datasheets.

EPA Method 1699

These samples were extracted and analyzed for the DDX list of chlorinated pesticides by EPA Method 1699 using a ZB-50 GC column. The concentrations of the PRCs are listed following the results for 4,4'-DDMU on each datasheet. The PRCs were not added to the Method Blank or OPR.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1500540-01	CP-RW-01-S-M-20150615	15-Jun-15 08:10	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-02	REF-RW-01-S-M-20150615	15-Jun-15 09:55	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-03	OB-RW-01-S-M-20150615	15-Jun-15 11:20	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-04	OB-RW-01-S-B-20150615	15-Jun-15 11:40	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-05	SP-RW-01-S-M-20150615	15-Jun-15 12:30	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-06	LARE-RW-01-S-M-20150615	15-Jun-15 13:20	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-07	IB-RW-01-S-M-20150615	15-Jun-15 14:50	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-08	IB-RW-1001-S-M-20150615	15-Jun-15 15:15	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-09	IB-RW-01-S-B-20150615	15-Jun-15 15:45	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500540-10	IA-RW-01-S-M-20150615	15-Jun-15 16:15	16-Jun-15 09:35	Amber VOA Vial, 60mL

Vista Project: 1500540

Client Project: POLA/POLB LDL Study

ANALYTICAL RESULTS

Sample ID: Method Blank — EPA Method 1699

Matrix: SPME

QC Batch: B5F0078
Date Extracted: 18-Jun-2015 7:51

Lab Sample: B5F0078-BLK1
Date Analyzed: 20-Jun-15 02:40 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	3.99		
4,4'-DDE	ND	5.17		
2,4'-DDD	ND	5.34		
2,4'-DDT	ND	9.50		
4,4'-DDD	ND	6.00		
4,4'-DDT	ND	11.5		
4,4'-DDMU	ND	58.5		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	96.1	47 - 160	
IS	13C12-4,4'-DDE	100	47 - 160	
IS	13C12-2,4'-DDD	113	5 - 199	
IS	13C12-4,4'-DDD	105	5 - 120	
IS	13C12-4,4'-DDT	108	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1699

Matrix: SPME

QC Batch: B5F0078
Date Extracted: 18-Jun-2015 7:51

Lab Sample: B5F0078-BS1
Date Analyzed: 20-Jun-15 00:07 Column: ZB-50 Analyst: ANP

Analyte	Amt Found (pg/Sam	Spike Amt	%R	Limits
2,4'-DDE	2100	2000	105	24 - 123
4,4'-DDE	2010	2000	100	50 - 120
2,4'-DDD	2080	2000	104	50 - 120
2,4'-DDT	2120	2000	106	50 - 120
4,4'-DDD	1960	2000	98.0	42 - 120
4,4'-DDT	2030	2000	102	50 - 120
4,4'-DDMU	21100	20000	106	50 - 120

	Labeled Standard	%R	LCL-UCL
IS	13C12-2,4'-DDE	76.4	26 - 169
IS	13C12-4,4'-DDE	76.4	26 - 169
IS	13C12-2,4'-DDD	93.0	14 - 200
IS	13C12-4,4'-DDD	95.3	14 - 200
IS	13C12-4,4'-DDT	97.8	13 - 200

LCL-UCL - Lower control limit - upper control limit

Sample ID: CP-RW-01-S-M-20150615 — EPA Method 1699

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 8:10

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500540-01 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 02:48 Column: ZB-50 Analyst: ANP
23-Jun-15 23:18 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	3700			
4,4'-DDE	24200			D
2,4'-DDD	306			
2,4'-DDT	24.5			J
4,4'-DDD	711			
4,4'-DDT	72.2			J
4,4'-DDMU	2770			
d8-4,4'-DDD	367			
d8-4,4'-DDT	5870			
d8-2,4'-DDE	6220			
d8-4,4'-DDE	6850			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	80.2	47 - 160	
IS	13C12-4,4'-DDE	84.5	47 - 160	D
IS	13C12-2,4'-DDD	79.7	5 - 199	
IS	13C12-4,4'-DDD	70.9	5 - 120	
IS	13C12-4,4'-DDT	75.7	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: REF-RW-01-S-M-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 9:55

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-02 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 03:41 Column: ZB-50 Analyst: ANP
24-Jun-15 00:10 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	2240			
4,4'-DDE	14400			D
2,4'-DDD	151			
2,4'-DDT	ND	11.5		
4,4'-DDD	401			
4,4'-DDT	45.9			J
4,4'-DDMU	2690			
d8-4,4'-DDD	3560			
d8-4,4'-DDT	12000			
d8-2,4'-DDE	12000			
d8-4,4'-DDE	9920			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	87.2	47 - 160	
IS	13C12-4,4'-DDE	95.2	47 - 160	D
IS	13C12-2,4'-DDD	83.8	5 - 199	
IS	13C12-4,4'-DDD	75.2	5 - 120	
IS	13C12-4,4'-DDT	81.7	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: OB-RW-01-S-M-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:20

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-03 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 04:33 Column: ZB-50 Analyst: ANP
24-Jun-15 01:01 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	4270			
4,4'-DDE	22700			D
2,4'-DDD	240			
2,4'-DDT	ND	11.6		
4,4'-DDD	601			
4,4'-DDT	32.2			J
4,4'-DDMU	3420			
d8-4,4'-DDD	5020			
d8-4,4'-DDT	14700			
d8-2,4'-DDE	13900			
d8-4,4'-DDE	12200			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	87.7	47 - 160	
IS	13C12-4,4'-DDE	92.2	47 - 160	D
IS	13C12-2,4'-DDD	85.6	5 - 199	
IS	13C12-4,4'-DDD	77.9	5 - 120	
IS	13C12-4,4'-DDT	83.5	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: OB-RW-01-S-B-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:40

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-04 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 05:26 Column: ZB-50 Analyst: ANP
24-Jun-15 01:53 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	3130			
4,4'-DDE	19000			D
2,4'-DDD	223			
2,4'-DDT	ND	9.69		
4,4'-DDD	611			
4,4'-DDT	47.0			J
4,4'-DDMU	2830			
d8-4,4'-DDD	4830			
d8-4,4'-DDT	15200			
d8-2,4'-DDE	14900			
d8-4,4'-DDE	12600			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	83.9	47 - 160	
IS	13C12-4,4'-DDE	82.1	47 - 160	D
IS	13C12-2,4'-DDD	79.5	5 - 199	
IS	13C12-4,4'-DDD	71.1	5 - 120	
IS	13C12-4,4'-DDT	76.3	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: SP-RW-01-S-M-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 12:30

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-05 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 06:19 Column: ZB-50 Analyst: ANP
24-Jun-15 02:44 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	2330			
4,4'-DDE	13300			D
2,4'-DDD	195			
2,4'-DDT	27.8			J
4,4'-DDD	537			
4,4'-DDT	80.2			
4,4'-DDMU	2320			
d8-4,4'-DDD	146			
d8-4,4'-DDT	4280			
d8-2,4'-DDE	4580			
d8-4,4'-DDE	4270			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	79.6	47 - 160	
IS	13C12-4,4'-DDE	99.3	47 - 160	D
IS	13C12-2,4'-DDD	76.2	5 - 199	
IS	13C12-4,4'-DDD	64.3	5 - 120	
IS	13C12-4,4'-DDT	71.4	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: LARE-RW-01-S-M-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 13:20

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-06 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 07:12 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	1010			
4,4'-DDE	8500			
2,4'-DDD	670			
2,4'-DDT	62.8			J
4,4'-DDD	2200			
4,4'-DDT	168			
4,4'-DDMU	1200			
d8-4,4'-DDD	1600			
d8-4,4'-DDT	6460			
d8-2,4'-DDE	11400			
d8-4,4'-DDE	8900			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	92.0	47 - 160	
IS	13C12-4,4'-DDE	77.1	47 - 160	
IS	13C12-2,4'-DDD	76.4	5 - 199	
IS	13C12-4,4'-DDD	58.4	5 - 120	
IS	13C12-4,4'-DDT	48.4	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: IB-RW-01-S-M-20150615 — EPA Method 1699

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 14:50

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500540-07 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 08:05 Column: ZB-50 Analyst: ANP
24-Jun-15 06:15 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	2550			
4,4'-DDE	14000			D
2,4'-DDD	359			
2,4'-DDT	ND	12.5		
4,4'-DDD	851			
4,4'-DDT	63.7			J
4,4'-DDMU	2570			
d8-4,4'-DDD	2060			
d8-4,4'-DDT	10500			
d8-2,4'-DDE	10400			
d8-4,4'-DDE	10000			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	79.7	47 - 160	
IS	13C12-4,4'-DDE	104	47 - 160	D
IS	13C12-2,4'-DDD	78.0	5 - 199	
IS	13C12-4,4'-DDD	65.3	5 - 120	
IS	13C12-4,4'-DDT	68.2	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: IB-RW-1001-S-M-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:15

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-08 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 12:34 Column: ZB-50 Analyst: ANP
24-Jun-15 07:07 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	2450			
4,4'-DDE	13700			D
2,4'-DDD	370			
2,4'-DDT	ND		32.8	
4,4'-DDD	907			
4,4'-DDT	98.9			
4,4'-DDMU	2450			
d8-4,4'-DDD	2440			
d8-4,4'-DDT	11300			
d8-2,4'-DDE	12300			
d8-4,4'-DDE	11300			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	87.0	47 - 160	
IS	13C12-4,4'-DDE	77.9	47 - 160	D
IS	13C12-2,4'-DDD	80.0	5 - 199	
IS	13C12-4,4'-DDD	66.2	5 - 120	
IS	13C12-4,4'-DDT	68.9	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: IB-RW-01-S-B-20150615 — EPA Method 1699

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500540-09 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 13:27 Column: ZB-50 Analyst: ANP
24-Jun-15 07:58 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	2650			
4,4'-DDE	14800			D
2,4'-DDD	384			
2,4'-DDT	31.8			J
4,4'-DDD	927			
4,4'-DDT	91.2			
4,4'-DDMU	2500			
d8-4,4'-DDD	1060			
d8-4,4'-DDT	9760			
d8-2,4'-DDE	8910			
d8-4,4'-DDE	9600			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	75.7	47 - 160	
IS	13C12-4,4'-DDE	99.8	47 - 160	D
IS	13C12-2,4'-DDD	79.5	5 - 199	
IS	13C12-4,4'-DDD	64.8	5 - 120	
IS	13C12-4,4'-DDT	71.3	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: IA-RW-01-S-M-20150615

EPA Method 1699

Client Data

Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 16:15

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500540-10 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0078 Date Extracted: 18-Jun-2015 7:51
Date Analyzed: 07-Jul-15 14:19 Column: ZB-50 Analyst: ANP
24-Jun-15 08:49 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	3490			
4,4'-DDE	21700			D
2,4'-DDD	795			
2,4'-DDT	64.2			J
4,4'-DDD	2130			
4,4'-DDT	202			
4,4'-DDMU	3180			
d8-4,4'-DDD	1050			
d8-4,4'-DDT	5020			
d8-2,4'-DDE	5590			
d8-4,4'-DDE	4790			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	85.5	47 - 160	
IS	13C12-4,4'-DDE	80.6	47 - 160	D
IS	13C12-2,4'-DDD	83.2	5 - 199	
IS	13C12-4,4'-DDD	66.9	5 - 120	
IS	13C12-4,4'-DDT	69.0	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Vial Masses

Vial Number	Lab ID	Initial Mass (g)	Final Mass (g)	Hexane Volume (mL)
60	1500540-01	37.1956	42.2491	60
54	1500540-02	37.4503	42.5156	60
50	1500540-03	37.1550	42.1653	60
52	1500540-04	37.0305	42.1430	60
58	1500540-05	37.1985	42.1494	60
56	1500540-06	36.8287	41.8993	60
64	1500540-07	37.1847	42.2707	60
66	1500540-08	36.8703	42.0741	60
68	1500540-09	37.3398	42.3484	60
62	1500540-10	37.3507	42.1049	60

Please note that the final masses include additional vial labels; the approximate label mass is 0.2677g.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

ENVIRON CHAIN-of-CUSTODY № 11485

18100 Von Karman Ave., Suite 600
Irvine, CA 92612
(949) 261-5151
(949) 261-6202 (fax)

707 Wilshire Blvd., Suite 4950
Los Angeles, Calif. 90017
(213) 943-6300
(213) 943-6301 (fax)

1702 E Highland Avenue, Suite 412
Phoenix, AZ 85016
(602) 734-7700
(602) 734-7701 (fax)

PROJECT NAME / FACILITY ID: POLA / POLB LDL Study

PROJECT NUMBER: 04 33310A11 DATE: June 15, 2015

PROJECT LOCATION: Santa Fe / Long Beach

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y N IF YES, GLOBAL ID #:

MSA#: WO#:

FIELD PERSON: J. Arblaster

PROJECT MANAGER: D. Howe

LABORATORY: Vista

SAMPLER:

SIGNATURE:

1500540
0.4°C

SAMPLE I.D. NUMBER	SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED / UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED 1668B PCBs + PAC	1694 DOTs + PIRC	COMMENTS
CP-RW-01-S-M-20150615	6/15	0810	1	F	W	1	-	-	X		Vial 59
CP-RW-01-S-M-20150615		0810								X	" 60
REF-RW-01-S-M-20150615		0955							X		" 53
REF-RW-01-S-M-20150615		0955								X	" 54
OB-RW-01-S-M-20150615		1120							X		" 49
OB-RW-01-S-M-20150615		1120								X	" 50
OB-RW-01-S-B-20150615		1140							Y		" 51
OB-RW-01-S-B-20150615		1140								X	" 52
SP-RW-01-S-M-20150615		1230							X		" 57
SP-RW-01-S-M-20150615		1230								X	" 58
LARE-RW-01-S-M-20150615		1320							X		" 55
LARE-RW-01-S-M-20150615		1320								X	" 56
IB-RW-01-S-M-20150615	↓	1450	↓	↓	↓	↓	↓	↓	X		" 63
TOTAL	X	X	X								

RELINQUISHED BY: TIME/DATE: 1730 15/6/15

RECEIVED BY: TIME/DATE:
(COMPANY): Vista Analytical 6/16/15 0935

RELINQUISHED BY: TIME/DATE:

RECEIVED BY: TIME/DATE:
(COMPANY):

RELINQUISHED BY: TIME/DATE:

RECEIVED BY: TIME/DATE:
(COMPANY):

TURNAROUND TIME (CIRCLE ONE): SAME DAY | 24 HOURS | 48 HOURS | 72 HOURS | 5 DAYS | NORMAL

SAMPLE INTEGRITY
INTACT: Y N Temp

IF SEALED, SEAL INTEGRITY
INTACT: Y N

H = HCL; N = HNO_3; S = H_2SO_4; U = UNKNOWN; NO = NONE; O = OTHER

FILE: LOG FORMS\Chain of Custody

ENVIRON

CHAIN-of-CUSTODY № 11487

PAGE 7 of 6

☒ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)
☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)
☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

MSA#: ______ WO#: ______

PROJECT NAME / FACILITY ID: POLA/POLB LDL

FIELD PERSON: J Ackleater

PROJECT NUMBER: 0433310A11

DATE: June 15/2015

PROJECT MANAGER: D Moore

PROJECT LOCATION: ______

LABORATORY: Vista

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #: ______

SAMPLER: [signature]

SIGNATURE: [signature]

1500540
0.4°C

SAMPLE I.D. NUMBER	SAMPLE DATE (YEAR)	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED: 1668B PCB + PRCs	1699 DDT + PRCs								COMMENTS
1B-RW-01-S-M-20150615	6/15	1450	–	–	W	1	–	–		X								Vial 64
1B-RW-1001-S-M-20150615	↓	1515	↓	↓	↓	↓	↓	↓	X									" 65
1B-RW-1001-S-M-20150615	↓	1515	↓	↓	↓	↓	↓	↓		X								" 66
1B-RW-01-S-B-20150615	↓	1545	↓	↓	↓	↓	↓	↓	X									" 67
1B-RW-01-S-B-20150615	↓	1545	↓	↓	↓	↓	↓	↓		X								" 68
1A-RW-01-S-M-20150615	↓	1615	↓	↓	↓	↓	↓	↓	X									" 61
1A-RW-01-S-M-20150615	↓	1615	↓	↓	↓	↓	↓	↓		X								" 62
TOTAL	X	X	X															

RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
[signature]	1730 15/6/15	[signature] (COMPANY): Vista Analytical	6/16/15 0935
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY: (COMPANY):	TIME/DATE:
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY: (COMPANY):	TIME/DATE:

TURNAROUND TIME (CIRCLE ONE): SAME DAY / 24 HOURS / 48 HOURS / 72 HOURS / 5 DAYS / (NORMAL)

SAMPLE INTEGRITY — INTACT: Y N Temp______

IF SEALED, SEAL INTEGRITY — INTACT: Y N

H = HCL; N = HNO3; S = H2SO4; U = UNKNOWN; NO = NONE; O = OTHER

FILE: LOG FORMS\Chain_of_Custody

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1500540 **TAT**

Samples Arrival:	**Date/Time** 6/10/15 0935	**Initials:** AM	**Location:** WR2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 6/10/15 1333	**Initials:** AM	**Location:** R-1 **Shelf/Rack:** NA

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	

Temp °C: 0.3	(uncorrected)	**Time:** 0950	**Thermometer ID:** IR-1
Temp °C: 6.4	(corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	Y		
Holding Time Acceptable?	Y		
Shipping Container(s) Intact?	Y		
Shipping Custody Seals Intact?	Y		
Shipping Documentation Present?	Y		
Airbill Trk # 7808 2461 4362	Y		
Sample Container Intact?	Y		
Sample Custody Seals Intact?			Y
Chain of Custody / Sample Documentation Present?	Y		
COC Anomaly/Sample Acceptance Form completed?			Y
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			Y

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)		
Shipping Container	Vista	(Client)	Retain	Return	Dispose

Comments:

Sample vials indicate analysis required as 1669, but it is understood to be a typo for 1699.

July 15, 2015

Vista Project I.D.: 1500545

Dr. David Moore
Ramboll Environ
18100 Von Karman Ave. Suite 600
Irvine, CA 92612

Dear Dr. Moore,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on June 17, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name 'POLA/POLB LDL Study'. The work was authorized under your Purchase Order No. 04 33310A11.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1500545
Case Narrative

Sample Condition on Receipt:

Three SPME samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. This report was amended to include the vial weights, which were omitted from the original report.

Analytical Notes:

Upon receipt, each vial was weighed and hexane was added to each vial, covering the SPME. A table containing the initial and final weights is included with the datasheets.

EPA Method 1699

These samples were extracted and analyzed for the DDX list of chlorinated pesticides by EPA Method 1699 using a ZB-50 GC column. The concentrations of the PRCs are listed following the results for 4,4'-DDMU on each datasheet. The PRCs were not added to the Method Blank or OPR.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1500545-01	CS-RW-01-S-M-20150616	16-Jun-15 08:20	17-Jun-15 09:20	Amber VOA Vial, 60mL
1500545-02	CS-RW-01-S-B-20150616	16-Jun-15 08:45	17-Jun-15 09:20	Amber VOA Vial, 60mL
1500545-03	FH-RW-01-S-M-20150616	16-Jun-15 09:35	17-Jun-15 09:20	Amber VOA Vial, 60mL

Vista Project: 1500545

Client Project: POLA/POLB LDL Study

ANALYTICAL RESULTS

Sample ID: Method Blank — EPA Method 1699

Matrix: SPME

QC Batch: B5F0083
Date Extracted: 19-Jun-2015 9:45

Lab Sample: B5F0083-BLK1
Date Analyzed: 20-Jun-15 01:49 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	3.41		
4,4'-DDE	ND	4.59		
2,4'-DDD	ND	7.55		
2,4'-DDT	ND	12.4		
4,4'-DDD	ND	7.80		
4,4'-DDT	ND	14.9		
4,4'-DDMU	ND	50.0		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	69.9	47 - 160	
IS	13C12-4,4'-DDE	66.5	47 - 160	
IS	13C12-2,4'-DDD	82.3	5 - 199	
IS	13C12-4,4'-DDD	79.6	5 - 120	
IS	13C12-4,4'-DDT	77.2	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1699

Matrix: SPME

QC Batch: B5F0083
Date Extracted: 19-Jun-2015 9:45

Lab Sample: B5F0083-BS1
Date Analyzed: 19-Jun-15 23:16 Column: ZB-50 Analyst: ANP

Analyte	Amt Found (pg/Sam	Spike Amt	%R	Limits
2,4'-DDE	1160	1000	116	24 - 123
4,4'-DDE	1160	1000	116	50 - 120
2,4'-DDD	1160	1000	116	50 - 120
2,4'-DDT	1150	1000	115	50 - 120
4,4'-DDD	1130	1000	113	42 - 120
4,4'-DDT	1140	1000	114	50 - 120
4,4'-DDMU	10800	10000	108	50 - 120

	Labeled Standard	%R	LCL-UCL
IS	13C12-2,4'-DDE	69.9	26 - 169
IS	13C12-4,4'-DDE	71.1	26 - 169
IS	13C12-2,4'-DDD	87.0	14 - 200
IS	13C12-4,4'-DDD	87.5	14 - 200
IS	13C12-4,4'-DDT	94.4	13 - 200

LCL-UCL - Lower control limit - upper control limit

Sample ID: CS-RW-01-S-M-20150616 — EPA Method 1699

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500545-01 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0083 Date Extracted: 19-Jun-2015 9:45
Date Analyzed: 07-Jul-15 00:09 Column: ZB-50 Analyst: ANP
23-Jun-15 20:44 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	1570			
4,4'-DDE	11900			D
2,4'-DDD	1130			
2,4'-DDT	45.3			J
4,4'-DDD	3330			
4,4'-DDT	172			
4,4'-DDMU	1580			
d8-4,4'-DDD	1280			
d8-4,4'-DDT	4750			
d8-2,4'-DDE	4610			
d8-4,4'-DDE	4320			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	81.8	47 - 160	
IS	13C12-4,4'-DDE	78.4	47 - 160	D
IS	13C12-2,4'-DDD	76.4	5 - 199	
IS	13C12-4,4'-DDD	69.9	5 - 120	
IS	13C12-4,4'-DDT	73.4	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: CS-RW-01-S-B-20150616 — EPA Method 1699

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500545-02 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0083 Date Extracted: 19-Jun-2015 9:45
Date Analyzed: 07-Jul-15 01:02 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	1520			
4,4'-DDE	9750			
2,4'-DDD	1080			
2,4'-DDT	35.7			J
4,4'-DDD	3190			
4,4'-DDT	186			
4,4'-DDMU	1470			
d8-4,4'-DDD	1970			
d8-4,4'-DDT	10700			
d8-2,4'-DDE	11200			
d8-4,4'-DDE	11000			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	83.9	47 - 160	
IS	13C12-4,4'-DDE	79.0	47 - 160	
IS	13C12-2,4'-DDD	76.7	5 - 199	
IS	13C12-4,4'-DDD	69.1	5 - 120	
IS	13C12-4,4'-DDT	72.2	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: FH-RW-01-S-M-20150616 — EPA Method 1699

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 9:35

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500545-03 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0083 Date Extracted: 19-Jun-2015 9:45
Date Analyzed: 07-Jul-15 01:55 Column: ZB-50 Analyst: ANP
23-Jun-15 22:27 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	2300			
4,4'-DDE	21300			D
2,4'-DDD	229			
2,4'-DDT	ND	12.1		
4,4'-DDD	515			
4,4'-DDT	ND	14.9		
4,4'-DDMU	1600			
d8-4,4'-DDD	3670			
d8-4,4'-DDT	10700			
d8-2,4'-DDE	9930			
d8-4,4'-DDE	9030			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	84.7	47 - 160	
IS	13C12-4,4'-DDE	116	47 - 160	D
IS	13C12-2,4'-DDD	78.6	5 - 199	
IS	13C12-4,4'-DDD	71.7	5 - 120	
IS	13C12-4,4'-DDT	78.2	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Vial Masses

Vial Number	Lab ID	Initial Mass (g)	Final Mass (g)	Hexane Volume (mL)
46	1500545-01	37.1780	41.9333	62
48	1500545-02	37.2046	41.9360	61
70	1500545-03	37.1949	41.9359	62

Please note that the final masses include additional vial labels; the approximate label mass is 0.2677g.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

ENVIRON CHAIN-of-CUSTODY № 11489

☒ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)

☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)

☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

MSA#: _____ WO#: _____

PROJECT NAME / FACILITY ID: PCLA/PCLB LDL Study

PROJECT NUMBER: 04 3331GA11 DATE: June 16 2015

PROJECT LOCATION: San Pedro

FIELD PERSON: J. Arblaster

PROJECT MANAGER: D. Moore

LABORATORY: Vista

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #: _____

SAMPLER: JA

SIGNATURE: JA

1500545
2.3%

SAMPLE I.D. NUMBER	SAMPLE DATE (YEAR)	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED 1668A + PCBs	1649 DIT + PAHs										COMMENTS
CS-RW-01-S-M-20150616	6/16	0810	-	-	S	1	-	-	X											S = SPME Vial 45
CS-RW-01-S-M-20150616		0810								X										Vial 46
CS-RW-01-S-B-20150616		0845							X											Vial 47
CS-RW-01-S-B-20150616		0845								X										Vial 48
FH-RW-01-S-M-20150616		0935							X											Vial 69
FH-RW-01-S-M-20150616	↓	0935	↓	↓	↓	↓	↓	↓		X										Vial 70
TOTAL	X	X	X																	

O = OTHER; NO = NONE; U = UNKNOWN; S = H_2SO_4; N = HNO_3; H = HCL;

RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
	1020 6/16/15	(COMPANY): Vista Analytical	6/17/15 0920
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
		(COMPANY):	
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
		(COMPANY):	

TURNAROUND TIME (CIRCLE ONE): SAME DAY / 24 HOURS / 48 HOURS / 72 HOURS / 5 DAYS / NORMAL

SAMPLE INTEGRITY — INTACT: Y N Temp_____

IF SEALED, SEAL INTEGRITY — INTACT: Y N

FILE: LOG FORMS\Chain of Custody

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1500545 **TAT** Standard

Samples Arrival:	**Date/Time** 6/17/15 0920	**Initials:**	**Location:** WR 2 **Shelf/Rack:** MA
Logged In:	**Date/Time** 6/17/15 1020	**Initials:**	**Location:** R-1 **Shelf/Rack:** NA

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	

Temp °C: 2.2 (uncorrected)	**Time:** 0923	**Thermometer ID:** IR-1
Temp °C: 2.3 (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7808 2853 1129	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	(None)	
Shipping Container	Vista	(Client)	Retain	Return	Dispose

Comments:

Sample Login 11/2013 ckt

July 16, 2015

Vista Project I.D.: 1500544

Dr. David Moore
Ramboll Environ
18100 Von Karman Ave. Suite 600
Irvine, CA 92612

Dear Dr. Moore,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on June 17, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name 'POLA/POLB LDL Study'. The work was authorized under your Purchase Order No. 04 33310A11.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1500544
Case Narrative

Sample Condition on Receipt:

Three SPME samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. This report was amended to include the vial weights, which were omitted from the original report.

Analytical Notes:

Upon receipt, each vial was weighed and hexane was added to each vial, covering the SPME. A table containing the initial and final weights is included with the datasheets.

EPA Method 1668C

The samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column. The concentrations of the PRCs are listed following the PCB total concentrations on each datasheet. The PRC solution was not added to the Method Blank or OPR.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1500544-01	CS-RW-01-S-M-20150616	16-Jun-15 08:20	17-Jun-15 09:20	Amber VOA Vial, 60mL
1500544-02	CS-RW-01-S-B-20150616	16-Jun-15 08:45	17-Jun-15 09:20	Amber VOA Vial, 60mL
1500544-03	FH-RW-01-S-M-20150616	16-Jun-15 09:35	17-Jun-15 09:20	Amber VOA Vial, 60mL

Vista Project: 1500544

Client Project: POLA/POLB LDL Study

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	ND	4.88			PCB-43/49	ND	4.83		
PCB-2	ND	4.87			PCB-44	ND	6.22		
PCB-3	ND	4.86			PCB-45	ND	5.29		
PCB-4/10	ND	15.2			PCB-46	ND	5.80		
PCB-5/8	ND	12.8			PCB-47	8.90			J
PCB-6	ND	13.1			PCB-48/75	ND	4.08		
PCB-7/9	ND	13.0			PCB-50	ND	5.60		
PCB-11	ND	12.0			PCB-51	ND	4.74		
PCB-12/13	ND	12.1			PCB-52/69	ND	4.26		
PCB-14	ND	10.5			PCB-53	ND	4.84		
PCB-15	ND	10.7			PCB-54	ND	4.26		
PCB-16/32	ND	3.19			PCB-55	ND	3.09		
PCB-17	ND	3.49			PCB-56/60	ND	3.44		
PCB-18	ND	3.77			PCB-57	ND	3.17		
PCB-19	ND	4.21			PCB-58	ND	3.12		
PCB-20/21/33	ND	3.04			PCB-61/70	ND	3.15		
PCB-22	ND	3.03			PCB-62	ND	3.99		
PCB-23	ND	2.91			PCB-63	ND	3.05		
PCB-24/27	ND	2.57			PCB-65	ND	4.11		
PCB-25	ND	3.21			PCB-66/76	ND	3.01		
PCB-26	ND	2.84			PCB-67	ND	3.25		
PCB-28	ND	2.84			PCB-68	ND	3.37		
PCB-29	ND	2.91			PCB-73	ND	3.90		
PCB-30	ND	2.66			PCB-74	ND	2.93		
PCB-31	ND	2.81			PCB-77	ND	3.06		
PCB-34	ND	2.71			PCB-78	ND	3.52		
PCB-35	ND	2.78			PCB-79	ND	3.28		
PCB-36	ND	2.69			PCB-80	ND	2.87		
PCB-37	ND	2.59			PCB-81	ND	3.21		
PCB-38	ND	2.81			PCB-82	ND	9.51		
PCB-39	ND	2.77			PCB-83	ND	5.49		
PCB-40	ND	6.32			PCB-84/92	ND	7.51		
PCB-41/64/71/72	ND	4.05			PCB-85/116	ND	6.55		
PCB-42/59	ND	4.38			PCB-86	ND	8.83		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	5.73			PCB-133/142	ND	6.87		
PCB-88/91	ND	8.09			PCB-134/143	ND	6.71		
PCB-89	ND	8.08			PCB-135	ND	10.2		
PCB-90/101	ND	6.67			PCB-136	ND	7.59		
PCB-93	ND	8.56			PCB-137	ND	5.82		
PCB-94	ND	8.04			PCB-138/163/164	ND	5.51		
PCB-95/98/102	ND	7.05			PCB-139/149	ND	9.39		
PCB-96	ND	5.56			PCB-140	ND	10.5		
PCB-97	ND	7.03			PCB-141	ND	5.93		
PCB-99	ND	6.44			PCB-144	ND	9.55		
PCB-100	ND	6.31			PCB-145	ND	7.93		
PCB-103	ND	6.28			PCB-146/165	ND	5.77		
PCB-104	ND	4.80			PCB-147	ND	10.5		
PCB-105	ND	3.55			PCB-148	ND	9.99		
PCB-106/118	ND	5.23			PCB-150	ND	7.69		
PCB-107/109	ND	5.29			PCB-151	ND	9.99		
PCB-108/112	ND	6.49			PCB-152	ND	7.42		
PCB-110	ND	5.36			PCB-153	ND	5.22		
PCB-111/115	ND	4.91			PCB-154	ND	9.18		
PCB-113	ND	6.00			PCB-155	ND	7.25		
PCB-114	ND	4.02			PCB-156	ND	4.81		
PCB-119	ND	4.85			PCB-157	ND	4.96		
PCB-120	ND	4.59			PCB-158/160	ND	5.15		
PCB-121	ND	5.16			PCB-159	ND	5.05		
PCB-122	ND	4.77			PCB-166	ND	5.41		
PCB-123	ND	5.64			PCB-167	ND	4.83		
PCB-124	ND	5.42			PCB-168	ND	4.60		
PCB-126	ND	4.69			PCB-169	ND	5.59		
PCB-127	ND	4.16			PCB-170	ND	5.14		
PCB-128/162	ND	5.97			PCB-171	ND	5.56		
PCB-129	ND	7.68			PCB-172	ND	5.98		
PCB-130	ND	7.45			PCB-173	ND	7.32		
PCB-131	ND	7.39			PCB-174	ND	6.28		
PCB-132/161	ND	5.58			PCB-175	ND	5.35		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-176	ND	3.85		
PCB-177	ND	6.39		
PCB-178	ND	5.21		
PCB-179	ND	4.02		
PCB-180	ND	5.58		
PCB-181	ND	6.00		
PCB-182/187	ND	4.93		
PCB-183	ND	4.57		
PCB-184	ND	4.18		
PCB-185	ND	5.76		
PCB-186	ND	3.84		
PCB-188	ND	3.68		
PCB-189	ND	3.89		
PCB-190	ND	3.82		
PCB-191	ND	4.35		
PCB-192	ND	4.65		
PCB-193	ND	4.37		
PCB-194	ND	4.13		
PCB-195	ND	4.67		
PCB-196/203	ND	7.41		
PCB-197	ND	5.26		
PCB-198	ND	8.14		
PCB-199	ND	8.28		
PCB-200	ND	5.93		
PCB-201	ND	5.60		
PCB-202	ND	6.02		
PCB-204	ND	5.72		
PCB-205	ND	3.31		
PCB-206	ND	5.25		
PCB-207	ND	3.00		
PCB-208	ND	3.04		
PCB-209	ND	4.18		
Total monoCB	ND	4.88		
Total diCB	ND	15.2		
Total triCB	ND	4.21		
Total tetraCB	8.90			
Total pentaCB	ND	9.51		
Total hexaCB	ND	10.5		
Total heptaCB	ND	7.32		
Total octaCB	ND	8.28		
Total nonaCB	ND	5.25		
DecaCB	ND	4.18		
Total PCB	8.90			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	65.4	5 - 145	
	13C-PCB-3	67.7	5 - 145	
	13C-PCB-4	59.4	5 - 145	
	13C-PCB-11	66.1	5 - 145	
	13C-PCB-9	61.2	5 - 145	
	13C-PCB-19	58.2	5 - 145	
	13C-PCB-28	93.9	5 - 145	
	13C-PCB-32	59.4	5 - 145	
	13C-PCB-37	118	5 - 145	
	13C-PCB-47	74.2	5 - 145	
	13C-PCB-52	77.9	5 - 145	
	13C-PCB-54	68.3	5 - 145	
	13C-PCB-70	88.0	5 - 145	
	13C-PCB-77	83.5	10 - 145	
	13C-PCB-80	81.9	10 - 145	
	13C-PCB-81	78.9	10 - 145	
	13C-PCB-95	76.9	10 - 145	
	13C-PCB-97	82.1	10 - 145	
	13C-PCB-101	78.0	10 - 145	
	13C-PCB-104	82.2	10 - 145	
	13C-PCB-105	114	10 - 145	
	13C-PCB-114	103	10 - 145	
	13C-PCB-118	79.3	10 - 145	
	13C-PCB-123	81.1	10 - 145	
	13C-PCB-126	106	10 - 145	
	13C-PCB-127	112	10 - 145	
	13C-PCB-138	86.9	10 - 145	
	13C-PCB-141	91.5	10 - 145	
	13C-PCB-153	90.8	10 - 145	
	13C-PCB-155	51.4	10 - 145	
	13C-PCB-156	88.5	10 - 145	
	13C-PCB-157	87.3	10 - 145	
	13C-PCB-159	86.1	10 - 145	
	13C-PCB-167	89.4	10 - 145	
	13C-PCB-169	86.6	10 - 145	
	13C-PCB-170	79.8	10 - 145	
	13C-PCB-180	73.6	10 - 145	
	13C-PCB-188	80.1	10 - 145	
	13C-PCB-189	83.0	10 - 145	
	13C-PCB-194	78.4	10 - 145	
	13C-PCB-202	64.1	10 - 145	
	13C-PCB-206	83.5	10 - 145	
	13C-PCB-208	66.4	10 - 145	
	13C-PCB-209	81.5	10 - 145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BS1
Date Analyzed: 24-Jun-15 11:18 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/Sample)	Spike Amt	%R	Limits
PCB-1	1730	2000	86.5	60 - 135
PCB-3	1750	2000	87.3	60 - 135
PCB-4/10	4080	4000	102	60 - 135
PCB-15	2000	2000	100	60 - 135
PCB-19	2170	2000	109	60 - 135
PCB-37	2140	2000	107	60 - 135
PCB-54	2170	2000	108	60 - 135
PCB-77	2050	2000	102	60 - 135
PCB-81	2020	2000	101	60 - 135
PCB-104	2140	2000	107	60 - 135
PCB-105	1900	2000	95.0	60 - 135
PCB-106/118	4230	4000	106	60 - 135
PCB-114	1890	2000	94.6	60 - 135
PCB-123	2060	2000	103	60 - 135
PCB-126	1870	2000	93.4	60 - 135
PCB-155	2310	2000	115	60 - 135
PCB-156	1870	2000	93.3	60 - 135
PCB-157	1900	2000	95.2	60 - 135
PCB-167	1890	2000	94.7	60 - 135
PCB-169	1960	2000	98.1	60 - 135
PCB-188	2020	2000	101	60 - 135
PCB-189	2120	2000	106	60 - 135
PCB-202	2170	2000	109	60 - 135
PCB-205	2040	2000	102	60 - 135
PCB-206	2140	2000	107	60 - 135
PCB-208	2020	2000	101	60 - 135
PCB-209	2000	2000	100	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	47.9	15 - 145
IS	13C-PCB-3	60.2	15 - 145
IS	13C-PCB-4	48.4	15 - 145
IS	13C-PCB-11	67.1	15 - 145
IS	13C-PCB-9	51.8	15 - 145
IS	13C-PCB-19	56.2	15 - 145
IS	13C-PCB-28	85.2	15 - 145
IS	13C-PCB-32	62.4	15 - 145
IS	13C-PCB-37	101	15 - 145
IS	13C-PCB-47	69.9	15 - 145
IS	13C-PCB-52	71.8	15 - 145
IS	13C-PCB-54	61.8	15 - 145
IS	13C-PCB-70	78.2	15 - 145
IS	13C-PCB-77	88.6	40 - 145
IS	13C-PCB-80	77.6	40 - 145
IS	13C-PCB-81	84.1	40 - 145
IS	13C-PCB-95	70.7	40 - 145
IS	13C-PCB-97	78.7	40 - 145
IS	13C-PCB-101	72.4	40 - 145
IS	13C-PCB-104	63.9	40 - 145
IS	13C-PCB-105	103	40 - 145
IS	13C-PCB-114	94.9	40 - 145
IS	13C-PCB-118	80.8	40 - 145
IS	13C-PCB-123	82.3	40 - 145
IS	13C-PCB-126	107	40 - 145
IS	13C-PCB-127	104	40 - 145
IS	13C-PCB-138	88.4	40 - 145
IS	13C-PCB-141	87.8	40 - 145
IS	13C-PCB-153	86.5	40 - 145
IS	13C-PCB-155	46.8	40 - 145
IS	13C-PCB-156	92.1	40 - 145
IS	13C-PCB-157	92.3	40 - 145
IS	13C-PCB-159	88.5	40 - 145
IS	13C-PCB-167	90.3	40 - 145
IS	13C-PCB-169	94.2	40 - 145
IS	13C-PCB-170	76.1	40 - 145
IS	13C-PCB-180	75.4	40 - 145
IS	13C-PCB-188	73.6	40 - 145
IS	13C-PCB-189	79.5	40 - 145
IS	13C-PCB-194	80.7	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BS1
Date Analyzed: 24-Jun-15 11:18 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/Sample)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	60.9	40 - 145
IS	13C-PCB-206	97.8	40 - 145
IS	13C-PCB-208	78.3	40 - 145
IS	13C-PCB-209	88.3	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: CS-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-01 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 22:13 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	7.57			J
PCB-2	2.68			J
PCB-3	3.04			J
PCB-4/10	58.3			
PCB-5/8	171			
PCB-6	41.3			
PCB-7/9	16.8			J
PCB-11	370			
PCB-12/13	ND	6.24		
PCB-14	ND	0.538		
PCB-15	64.7			
PCB-16/32	525			
PCB-17	223			
PCB-18	546			
PCB-19	103			
PCB-20/21/33	354			
PCB-22	251			
PCB-23	0.662			J
PCB-24/27	81.5			
PCB-25	87.6			
PCB-26	211			
PCB-28	810			
PCB-29	2.72			J
PCB-30	ND	0.813		
PCB-31	495			
PCB-34	7.63			J
PCB-35	20.4			
PCB-36	6.63			J
PCB-37	114			
PCB-38	18.3			
PCB-39	1.98			J
PCB-40	198			
PCB-41/64/71/72	1300			
PCB-42/59	367			
PCB-43/49	2280			
PCB-44	1130			
PCB-45	161			
PCB-46	135			
PCB-47	904			B
PCB-48/75	171			
PCB-50	13.4			
PCB-51	1500			
PCB-52/69	3560			
PCB-53	1220			
PCB-54	316			
PCB-55	21.3			
PCB-56/60	522			
PCB-57	16.7			
PCB-58	4.66			J
PCB-61/70	919			
PCB-62	ND	2.28		
PCB-63	35.0			
PCB-65	ND	2.35		
PCB-66/76	863			
PCB-67	37.5			
PCB-68	15.8			
PCB-73	53.8			
PCB-74	423			
PCB-77	67.7			
PCB-78	ND	2.04		
PCB-79	33.3			
PCB-80	ND	1.71		
PCB-81	3.62			J
PCB-82	154			
PCB-83	ND	1.78		
PCB-84/92	901			
PCB-85/116	212			
PCB-86	7.50			J
PCB-87/117/125	471			
PCB-88/91	613			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-01 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 22:13 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	20.5			
PCB-90/101	2500			
PCB-93	ND	2.71		
PCB-94	113			
PCB-95/98/102	2870			
PCB-96	126			
PCB-97	429			
PCB-99	1390			
PCB-100	276			
PCB-103	296			
PCB-104	77.1			
PCB-105	237			
PCB-106/118	922			
PCB-107/109	84.5			
PCB-108/112	66.8			
PCB-110	1600			
PCB-111/115	21.2			
PCB-113	11.7			
PCB-114	13.8			
PCB-119	166			
PCB-120	10.7			
PCB-121	ND	1.63		
PCB-122	9.81			J
PCB-123	17.5			
PCB-124	49.7			
PCB-126	4.56			J
PCB-127	ND	1.40		
PCB-128/162	104			
PCB-129	34.0			
PCB-130	59.2			
PCB-131	ND	2.74		
PCB-132/161	309			
PCB-133/142	51.4			
PCB-134/143	82.7			
PCB-135	297			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	398			
PCB-137	35.7			
PCB-138/163/164	1190			
PCB-139/149	2130			
PCB-140	8.50			J
PCB-141	235			
PCB-144	82.3			
PCB-145	ND	1.54		
PCB-146/165	285			
PCB-147	201			
PCB-148	16.1			
PCB-150	49.5			
PCB-151	789			
PCB-152	31.7			
PCB-153	1840			
PCB-154	245			
PCB-155	7.66			J
PCB-156	55.9			
PCB-157	12.5			
PCB-158/160	114			
PCB-159	ND	1.70		
PCB-166	2.22			J
PCB-167	32.0			
PCB-168	8.55			J
PCB-169	ND	2.01		
PCB-170	169			
PCB-171	59.5			
PCB-172	42.6			
PCB-173	ND		4.45	
PCB-174	324			
PCB-175	14.4			
PCB-176	42.5			
PCB-177	172			
PCB-178	90.8			
PCB-179	233			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-01 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 22:13 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	518			
PCB-181	ND	2.88		
PCB-182/187	564			
PCB-183	165			
PCB-184	ND	1.89		
PCB-185	39.4			
PCB-186	ND	1.74		
PCB-188	8.46			J
PCB-189	6.63			J
PCB-190	42.1			
PCB-191	9.63			J
PCB-192	ND	2.25		
PCB-193	37.3			
PCB-194	53.4			
PCB-195	25.9			
PCB-196/203	101			
PCB-197	5.87			J
PCB-198	5.66			J
PCB-199	109			
PCB-200	15.9			
PCB-201	16.4			
PCB-202	36.0			
PCB-204	ND	4.60		
PCB-205	2.68			J
PCB-206	17.6			
PCB-207	2.23			J
PCB-208	5.58			J
PCB-209	4.66			J
Total monoCB	13.3			
Total diCB	721			
Total triCB	3860			
Total tetraCB	16300			
Total pentaCB	13700			
Total hexaCB	8700			
Total heptaCB	2540			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	372			
Total nonaCB	25.4			
DecaCB	4.66			
Total PCB	46200			B
13C-PCB-8	6.24			
13C-PCB-31	105			
13C-PCB-79	408			
13C-PCB-133	527			
13C-PCB-178	367			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-01 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 22:13 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	70.8	5 -145	
	13C-PCB-3	75.5	5 -145	
	13C-PCB-4	60.3	5 -145	
	13C-PCB-11	74.2	5 -145	
	13C-PCB-9	65.3	5 -145	
	13C-PCB-19	75.0	5 -145	
	13C-PCB-28	87.0	5 -145	
	13C-PCB-32	81.2	5 -145	
	13C-PCB-37	101	5 -145	
	13C-PCB-47	80.1	5 -145	
	13C-PCB-52	83.3	5 -145	
	13C-PCB-54	65.3	5 -145	
	13C-PCB-70	84.4	5 -145	
	13C-PCB-77	85.5	10 -145	
	13C-PCB-80	83.4	10 -145	
	13C-PCB-81	83.4	10 -145	
	13C-PCB-95	76.9	10 -145	
	13C-PCB-97	79.0	10 -145	
	13C-PCB-101	77.0	10 -145	
	13C-PCB-104	73.6	10 -145	
	13C-PCB-105	99.5	10 -145	
	13C-PCB-114	98.5	10 -145	
	13C-PCB-118	81.2	10 -145	
	13C-PCB-123	80.7	10 -145	
	13C-PCB-126	100	10 -145	
	13C-PCB-127	106	10 -145	
	13C-PCB-138	91.9	10 -145	
	13C-PCB-141	94.3	10 -145	
	13C-PCB-153	110	10 -145	
	13C-PCB-155	59.1	10 -145	
	13C-PCB-156	87.5	10 -145	
	13C-PCB-157	85.8	10 -145	
	13C-PCB-159	90.9	10 -145	
	13C-PCB-167	91.0	10 -145	
	13C-PCB-169	87.3	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	74.7	10 -145	
13C-PCB-180	75.0	10 -145	
13C-PCB-188	83.7	10 -145	
13C-PCB-189	75.2	10 -145	
13C-PCB-194	82.7	10 -145	
13C-PCB-202	57.2	10 -145	
13C-PCB-206	80.6	10 -145	
13C-PCB-208	75.2	10 -145	
13C-PCB-209	77.2	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-B-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-02 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 23:18 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	ND		4.50	
PCB-2	ND	1.67		
PCB-3	2.64			J
PCB-4/10	44.4			
PCB-5/8	155			
PCB-6	40.1			
PCB-7/9	12.6			J
PCB-11	284			
PCB-12/13	11.5			J
PCB-14	ND	4.56		
PCB-15	54.3			
PCB-16/32	556			
PCB-17	222			
PCB-18	523			
PCB-19	98.1			
PCB-20/21/33	371			
PCB-22	261			
PCB-23	ND	1.95		
PCB-24/27	87.1			
PCB-25	95.4			
PCB-26	256			
PCB-28	711			
PCB-29	3.48			J
PCB-30	ND	0.967		
PCB-31	508			
PCB-34	8.73			J
PCB-35	17.9			
PCB-36	5.66			J
PCB-37	108			
PCB-38	25.9			
PCB-39	1.53			J
PCB-40	195			
PCB-41/64/71/72	1530			
PCB-42/59	365			
PCB-43/49	3200			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	1130			
PCB-45	165			
PCB-46	168			
PCB-47	1180			B
PCB-48/75	194			
PCB-50	17.5			
PCB-51	2490			
PCB-52/69	5100			
PCB-53	1890			
PCB-54	472			
PCB-55	27.7			
PCB-56/60	515			
PCB-57	21.7			
PCB-58	9.42			J
PCB-61/70	899			
PCB-62	ND	3.44		
PCB-63	36.6			
PCB-65	ND	3.55		
PCB-66/76	873			
PCB-67	34.0			
PCB-68	19.3			
PCB-73	ND	3.49		
PCB-74	409			
PCB-77	67.2			
PCB-78	ND	3.05		
PCB-79	37.9			
PCB-80	ND	2.62		
PCB-81	3.82			J
PCB-82	169			
PCB-83	ND	2.24		
PCB-84/92	1090			
PCB-85/116	202			
PCB-86	5.77			J
PCB-87/117/125	513			
PCB-88/91	841			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-B-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-02 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 23:18 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	21.9			
PCB-90/101	3040			
PCB-93	ND	3.50		
PCB-94	183			
PCB-95/98/102	4010			
PCB-96	202			
PCB-97	445			
PCB-99	1790			
PCB-100	443			
PCB-103	456			
PCB-104	129			
PCB-105	230			
PCB-106/118	987			
PCB-107/109	91.7			
PCB-108/112	73.9			
PCB-110	1700			
PCB-111/115	24.4			
PCB-113	19.1			
PCB-114	12.2			
PCB-119	249			
PCB-120	14.1			
PCB-121	ND	2.11		
PCB-122	8.45			J
PCB-123	15.9			
PCB-124	55.2			
PCB-126	5.41			J
PCB-127	ND	3.82		
PCB-128/162	112			
PCB-129	33.4			
PCB-130	74.7			
PCB-131	ND	2.40		
PCB-132/161	336			
PCB-133/142	61.3			
PCB-134/143	104			
PCB-135	404			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	556			
PCB-137	44.7			
PCB-138/163/164	1370			
PCB-139/149	2890			
PCB-140	12.7			
PCB-141	281			
PCB-144	109			
PCB-145	ND	1.73		
PCB-146/165	347			
PCB-147	317			
PCB-148	30.9			
PCB-150	77.7			
PCB-151	1100			
PCB-152	57.2			
PCB-153	2240			
PCB-154	392			
PCB-155	10.8			
PCB-156	66.8			
PCB-157	12.0			
PCB-158/160	122			
PCB-159	ND	1.59		
PCB-166	ND	1.70		
PCB-167	40.0			
PCB-168	10.4			
PCB-169	ND	2.20		
PCB-170	199			
PCB-171	81.8			
PCB-172	46.6			
PCB-173	7.37			J
PCB-174	439			
PCB-175	16.0			
PCB-176	58.3			
PCB-177	213			
PCB-178	126			
PCB-179	341			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-B-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-02 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 23:18 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	634			
PCB-181	ND	3.31		
PCB-182/187	754			
PCB-183	204			
PCB-184	ND	2.07		
PCB-185	53.0			
PCB-186	ND	1.90		
PCB-188	11.1			
PCB-189	7.29			J
PCB-190	49.5			
PCB-191	7.98			J
PCB-192	ND	2.57		
PCB-193	42.4			
PCB-194	71.4			
PCB-195	31.4			
PCB-196/203	120			
PCB-197	5.00			J
PCB-198	5.68			J
PCB-199	123			
PCB-200	15.5			
PCB-201	17.9			
PCB-202	42.9			
PCB-204	ND	2.04		
PCB-205	4.15			J
PCB-206	20.7			
PCB-207	2.70			J
PCB-208	5.45			J
PCB-209	ND		2.52	
Total monoCB	2.64		7.14	
Total diCB	602			
Total triCB	3860			
Total tetraCB	21000			
Total pentaCB	17000			
Total hexaCB	11200			
Total heptaCB	3290			
Total octaCB	437			
Total nonaCB	28.9			
DecaCB	ND		2.52	
Total PCB	57500			B
13C-PCB-8	11.5			
13C-PCB-31	190			
13C-PCB-79	831			
13C-PCB-133	956			
13C-PCB-178	751			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CS-RW-01-S-B-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 8:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-02 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 23:18 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	91.6	5 -145	
	13C-PCB-3	97.0	5 -145	
	13C-PCB-4	74.3	5 -145	
	13C-PCB-11	88.8	5 -145	
	13C-PCB-9	80.3	5 -145	
	13C-PCB-19	89.8	5 -145	
	13C-PCB-28	97.5	5 -145	
	13C-PCB-32	98.3	5 -145	
	13C-PCB-37	112	5 -145	
	13C-PCB-47	92.2	5 -145	
	13C-PCB-52	93.5	5 -145	
	13C-PCB-54	74.0	5 -145	
	13C-PCB-70	97.6	5 -145	
	13C-PCB-77	98.6	10 -145	
	13C-PCB-80	97.3	10 -145	
	13C-PCB-81	96.9	10 -145	
	13C-PCB-95	86.1	10 -145	
	13C-PCB-97	92.1	10 -145	
	13C-PCB-101	90.0	10 -145	
	13C-PCB-104	84.3	10 -145	
	13C-PCB-105	119	10 -145	
	13C-PCB-114	114	10 -145	
	13C-PCB-118	91.5	10 -145	
	13C-PCB-123	90.7	10 -145	
	13C-PCB-126	122	10 -145	
	13C-PCB-127	120	10 -145	
	13C-PCB-138	106	10 -145	
	13C-PCB-141	108	10 -145	
	13C-PCB-153	126	10 -145	
	13C-PCB-155	65.6	10 -145	
	13C-PCB-156	98.2	10 -145	
	13C-PCB-157	95.7	10 -145	
	13C-PCB-159	104	10 -145	
	13C-PCB-167	99.1	10 -145	
	13C-PCB-169	93.3	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	78.3	10 -145	
13C-PCB-180	77.3	10 -145	
13C-PCB-188	93.3	10 -145	
13C-PCB-189	79.8	10 -145	
13C-PCB-194	85.2	10 -145	
13C-PCB-202	67.6	10 -145	
13C-PCB-206	85.1	10 -145	
13C-PCB-208	73.7	10 -145	
13C-PCB-209	74.4	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FH-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 9:35

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-03 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 26-Jun-15 00:22 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	9.25			J
PCB-2	2.43			J
PCB-3	3.80			J
PCB-4/10	104			
PCB-5/8	264			
PCB-6	75.4			
PCB-7/9	26.8			
PCB-11	358			
PCB-12/13	20.1			
PCB-14	ND	5.34		
PCB-15	120			
PCB-16/32	576			
PCB-17	333			
PCB-18	850			
PCB-19	135			
PCB-20/21/33	463			
PCB-22	265			
PCB-23	0.947			J
PCB-24/27	100			
PCB-25	175			
PCB-26	257			
PCB-28	1180			
PCB-29	5.56			J
PCB-30	ND	1.06		
PCB-31	928			
PCB-34	5.83			J
PCB-35	26.6			
PCB-36	5.91			J
PCB-37	140			
PCB-38	16.6			
PCB-39	2.34			J
PCB-40	330			
PCB-41/64/71/72	1670			
PCB-42/59	669			
PCB-43/49	1920			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	1910			
PCB-45	257			
PCB-46	149			
PCB-47	763			B
PCB-48/75	363			
PCB-50	9.55			J
PCB-51	150			
PCB-52/69	2610			
PCB-53	455			
PCB-54	18.8			
PCB-55	24.2			
PCB-56/60	980			
PCB-57	11.7			
PCB-58	8.59			J
PCB-61/70	1800			
PCB-62	ND	1.34		
PCB-63	70.7			
PCB-65	ND	1.39		
PCB-66/76	1820			
PCB-67	62.5			
PCB-68	18.8			
PCB-73	5.00			J
PCB-74	893			
PCB-77	128			
PCB-78	ND	1.15		
PCB-79	32.1			
PCB-80	ND	0.935		
PCB-81	4.00			J
PCB-82	307			
PCB-83	ND	3.21		
PCB-84/92	1060			
PCB-85/116	421			
PCB-86	12.7			
PCB-87/117/125	778			
PCB-88/91	479			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FH-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 9:35

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-03 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 26-Jun-15 00:22 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	37.7			
PCB-90/101	2660			
PCB-93	ND	4.92		
PCB-94	21.0			
PCB-95/98/102	2090			
PCB-96	29.5			
PCB-97	802			
PCB-99	1320			
PCB-100	20.0			
PCB-103	35.4			
PCB-104	1.94			J
PCB-105	491			
PCB-106/118	1690			
PCB-107/109	150			
PCB-108/112	121			
PCB-110	2540			
PCB-111/115	37.3			
PCB-113	5.45			J
PCB-114	26.1			
PCB-119	69.2			
PCB-120	8.26			J
PCB-121	ND	2.97		
PCB-122	17.9			
PCB-123	34.4			
PCB-124	70.3			
PCB-126	8.06			J
PCB-127	ND	1.56		
PCB-128/162	174			
PCB-129	40.6			
PCB-130	80.9			
PCB-131	ND	1.56		
PCB-132/161	300			
PCB-133/142	35.4			
PCB-134/143	70.7			
PCB-135	192			
PCB-136	192			
PCB-137	48.1			
PCB-138/163/164	1070			
PCB-139/149	1170			
PCB-140	8.19			J
PCB-141	159			
PCB-144	66.1			
PCB-145	ND	3.77		
PCB-146/165	189			
PCB-147	48.9			
PCB-148	3.44			J
PCB-150	6.73			J
PCB-151	329			
PCB-152	3.41			J
PCB-153	1030			
PCB-154	28.3			
PCB-155	ND	1.70		
PCB-156	73.1			
PCB-157	20.5			
PCB-158/160	106			
PCB-159	ND	1.07		
PCB-166	5.15			J
PCB-167	38.7			
PCB-168	3.74			J
PCB-169	ND	1.31		
PCB-170	84.8			
PCB-171	33.4			
PCB-172	17.9			
PCB-173	ND	1.35		
PCB-174	154			
PCB-175	8.92			J
PCB-176	23.4			
PCB-177	87.3			
PCB-178	38.9			
PCB-179	97.2			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FH-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 9:35

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-03 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 26-Jun-15 00:22 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	243			
PCB-181	ND	1.11		
PCB-182/187	250			
PCB-183	79.9			
PCB-184	ND	0.728		
PCB-185	18.0			
PCB-186	ND	0.668		
PCB-188	1.31			J
PCB-189	3.50			J
PCB-190	15.4			
PCB-191	4.16			J
PCB-192	ND	0.861		
PCB-193	12.1			
PCB-194	29.6			
PCB-195	11.9			
PCB-196/203	48.8			
PCB-197	ND	2.19		
PCB-198	ND	3.39		
PCB-199	59.3			
PCB-200	7.14			J
PCB-201	12.0			
PCB-202	29.3			
PCB-204	ND	2.38		
PCB-205	ND	2.14		
PCB-206	20.6			
PCB-207	ND	2.56		
PCB-208	7.49			J
PCB-209	4.87			J
Total monoCB	15.5			
Total diCB	969			
Total triCB	5470			
Total tetraCB	17100			
Total pentaCB	15300			
Total hexaCB	5490			
Total heptaCB	1170			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	198			
Total nonaCB	28.1			
DecaCB	4.87			
Total PCB	45800			B
13C-PCB-8	12.1			
13C-PCB-31	195			
13C-PCB-79	819			
13C-PCB-133	813			
13C-PCB-178	705			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FH-RW-01-S-M-20150616

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 16-Jun-2015 9:35

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500544-03 Date Received: 17-Jun-2015 9:20
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 26-Jun-15 00:22 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	75.9	5 -145	
	13C-PCB-3	76.1	5 -145	
	13C-PCB-4	57.0	5 -145	
	13C-PCB-11	74.9	5 -145	
	13C-PCB-9	65.4	5 -145	
	13C-PCB-19	73.2	5 -145	
	13C-PCB-28	87.4	5 -145	
	13C-PCB-32	80.2	5 -145	
	13C-PCB-37	100	5 -145	
	13C-PCB-47	78.3	5 -145	
	13C-PCB-52	81.1	5 -145	
	13C-PCB-54	62.9	5 -145	
	13C-PCB-70	84.0	5 -145	
	13C-PCB-77	88.5	10 -145	
	13C-PCB-80	87.3	10 -145	
	13C-PCB-81	85.1	10 -145	
	13C-PCB-95	79.0	10 -145	
	13C-PCB-97	83.1	10 -145	
	13C-PCB-101	79.9	10 -145	
	13C-PCB-104	81.2	10 -145	
	13C-PCB-105	102	10 -145	
	13C-PCB-114	95.1	10 -145	
	13C-PCB-118	84.8	10 -145	
	13C-PCB-123	81.6	10 -145	
	13C-PCB-126	104	10 -145	
	13C-PCB-127	105	10 -145	
	13C-PCB-138	92.2	10 -145	
	13C-PCB-141	95.4	10 -145	
	13C-PCB-153	114	10 -145	
	13C-PCB-155	58.1	10 -145	
	13C-PCB-156	90.7	10 -145	
	13C-PCB-157	87.7	10 -145	
	13C-PCB-159	91.2	10 -145	
	13C-PCB-167	90.6	10 -145	
	13C-PCB-169	84.7	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	68.0	10 -145	
13C-PCB-180	69.5	10 -145	
13C-PCB-188	79.0	10 -145	
13C-PCB-189	71.1	10 -145	
13C-PCB-194	84.2	10 -145	
13C-PCB-202	60.8	10 -145	
13C-PCB-206	77.6	10 -145	
13C-PCB-208	77.0	10 -145	
13C-PCB-209	73.7	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Vial Masses

Vial Number	Lab ID	Initial Mass (g)	Final Mass (g)	Hexane Volume (mL)
45	1500544-01	37.2095	42.0122	62
47	1500544-02	37.0235	41.7510	62
69	1500544-03	37.6173	42.4040	62

Please note that the final masses include additional vial labels; the approximate label mass is 0.2677g.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

ENVIRON CHAIN-of-CUSTODY № 11489

☒ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)
☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)
☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

MSA#: _____ WO#: _____

PROJECT NAME / FACILITY ID: POLA/POLB LDL Study.

PROJECT NUMBER: 04 33316.A11 DATE: June 16 2015

PROJECT LOCATION: San Pedro.

FIELD PERSON: J. Arblaster

PROJECT MANAGER: D. Moore.

LABORATORY: Vista.

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #: _____

SAMPLER: JA

SIGNATURE: JA

1500544
2.3°C

SAMPLE I.D. NUMBER	SAMPLE DATE (YEAR)	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED 1668A PCBs + PACs	1699 DDTs + PACs	COMMENTS
CS-RW-01-S-M-20150616	6/16	0820	-	-	S	1	-	-	X		S = SPME Vial 45
CS-RW-01-S-M-20150616		0820								X	Vial 46
CS-RW-01-S-B-20150616		0845							X		Vial 47
CS-RW-01-S-B-20150616		0845								X	Vial 48
FH-RW-01-S-M-20150616		0935							X		Vial 69
FH-RW-01-S-M-20150616	↓	0935	↓	↓	↓	↓	↓	↓		X	Vial 70
TOTAL	X	X	X								

O = OTHER; NO = NONE; U = UNKNOWN; S = H_2SO_4; N = HNO_3; H = HCL;

RELINQUISHED BY: JA	TIME/DATE: 1020 6/16/15	RECEIVED BY:	TIME/DATE:
RELINQUISHED BY:	TIME/DATE:	(COMPANY): Vista Analytical	6/17/15 0920
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
		(COMPANY):	
		RECEIVED BY:	TIME/DATE:
		(COMPANY):	

TURNAROUND TIME (CIRCLE ONE): SAME DAY / 24 HOURS / 48 HOURS / 72 HOURS / 5 DAYS / (NORMAL)

SAMPLE INTEGRITY — INTACT: Y N Temp_____

IF SEALED, SEAL INTEGRITY — INTACT: Y N

FILE: LOG FORMS\Chain of Custody

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1500544 **TAT** standard

Samples Arrival:	**Date/Time** 6/17/15 0920	**Initials:**	**Location:** WR 2 **Shelf/Rack:** MA
Logged In:	**Date/Time** 6/17/15 1003	**Initials:**	**Location:** R-1 **Shelf/Rack:** MA

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice	Dry Ice	None		

Temp °C: 2.2 (uncorrected)	**Time:** 0923	**Thermometer ID:** IR-1	
Temp °C: 2.3 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7808 2853 1129	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	(None)	
Shipping Container	Vista	(Client)	Retain	Return	Dispose

Comments:

Sample Login 11/2013 ckt

July 15, 2015

Vista Project I.D.: 1500539

Dr. David Moore
Ramboll Environ
18100 Von Karman Ave. Suite 600
Irvine, CA 92612

Dear Dr. Moore,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on June 16, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name 'POLA/POLB LDL Study'. The work was authorized under your Purchase Order No. 04 33310A11.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1500539
Case Narrative

Sample Condition on Receipt:

Ten SPME samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

Analytical Notes:

Upon receipt, each vial was weighed and hexane was added to each vial, covering the SPME. A table containing the initial and final weights is included with the datasheets.

EPA Method 1668C

The samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column. The concentrations of the PRCs are listed following the PCB total concentrations on each datasheet. The PRC solution was not added to the Method Blank or OPR.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1500539-01	CP-RW-01-S-M-20150615	15-Jun-15 08:10	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-02	REF-RW-01-S-M-20150615	15-Jun-15 09:55	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-03	OB-RW-01-S-M-20150615	15-Jun-15 11:20	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-04	OB-RW-01-S-B-20150615	15-Jun-15 11:40	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-05	SP-RW-01-S-M-20150615	15-Jun-15 12:30	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-06	LARE-RW-01-S-M-20150615	15-Jun-15 13:20	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-07	IB-RW-01-S-M-20150615	15-Jun-15 14:50	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-08	IB-RW-1001-S-M-20150615	15-Jun-15 15:15	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-09	IB-RW-01-S-B-20150615	15-Jun-15 15:45	16-Jun-15 09:35	Amber VOA Vial, 60mL
1500539-10	IA-RW-01-S-M-20150615	15-Jun-15 16:15	16-Jun-15 09:35	Amber VOA Vial, 60mL

Vista Project: 1500539

Client Project: POLA/POLB LDL Study

ANALYTICAL RESULTS

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	ND	4.88			PCB-43/49	ND	4.83		
PCB-2	ND	4.87			PCB-44	ND	6.22		
PCB-3	ND	4.86			PCB-45	ND	5.29		
PCB-4/10	ND	15.2			PCB-46	ND	5.80		
PCB-5/8	ND	12.8			PCB-47	8.90			J
PCB-6	ND	13.1			PCB-48/75	ND	4.08		
PCB-7/9	ND	13.0			PCB-50	ND	5.60		
PCB-11	ND	12.0			PCB-51	ND	4.74		
PCB-12/13	ND	12.1			PCB-52/69	ND	4.26		
PCB-14	ND	10.5			PCB-53	ND	4.84		
PCB-15	ND	10.7			PCB-54	ND	4.26		
PCB-16/32	ND	3.19			PCB-55	ND	3.09		
PCB-17	ND	3.49			PCB-56/60	ND	3.44		
PCB-18	ND	3.77			PCB-57	ND	3.17		
PCB-19	ND	4.21			PCB-58	ND	3.12		
PCB-20/21/33	ND	3.04			PCB-61/70	ND	3.15		
PCB-22	ND	3.03			PCB-62	ND	3.99		
PCB-23	ND	2.91			PCB-63	ND	3.05		
PCB-24/27	ND	2.57			PCB-65	ND	4.11		
PCB-25	ND	3.21			PCB-66/76	ND	3.01		
PCB-26	ND	2.84			PCB-67	ND	3.25		
PCB-28	ND	2.84			PCB-68	ND	3.37		
PCB-29	ND	2.91			PCB-73	ND	3.90		
PCB-30	ND	2.66			PCB-74	ND	2.93		
PCB-31	ND	2.81			PCB-77	ND	3.06		
PCB-34	ND	2.71			PCB-78	ND	3.52		
PCB-35	ND	2.78			PCB-79	ND	3.28		
PCB-36	ND	2.69			PCB-80	ND	2.87		
PCB-37	ND	2.59			PCB-81	ND	3.21		
PCB-38	ND	2.81			PCB-82	ND	9.51		
PCB-39	ND	2.77			PCB-83	ND	5.49		
PCB-40	ND	6.32			PCB-84/92	ND	7.51		
PCB-41/64/71/72	ND	4.05			PCB-85/116	ND	6.55		
PCB-42/59	ND	4.38			PCB-86	ND	8.83		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	5.73			PCB-133/142	ND	6.87		
PCB-88/91	ND	8.09			PCB-134/143	ND	6.71		
PCB-89	ND	8.08			PCB-135	ND	10.2		
PCB-90/101	ND	6.67			PCB-136	ND	7.59		
PCB-93	ND	8.56			PCB-137	ND	5.82		
PCB-94	ND	8.04			PCB-138/163/164	ND	5.51		
PCB-95/98/102	ND	7.05			PCB-139/149	ND	9.39		
PCB-96	ND	5.56			PCB-140	ND	10.5		
PCB-97	ND	7.03			PCB-141	ND	5.93		
PCB-99	ND	6.44			PCB-144	ND	9.55		
PCB-100	ND	6.31			PCB-145	ND	7.93		
PCB-103	ND	6.28			PCB-146/165	ND	5.77		
PCB-104	ND	4.80			PCB-147	ND	10.5		
PCB-105	ND	3.55			PCB-148	ND	9.99		
PCB-106/118	ND	5.23			PCB-150	ND	7.69		
PCB-107/109	ND	5.29			PCB-151	ND	9.99		
PCB-108/112	ND	6.49			PCB-152	ND	7.42		
PCB-110	ND	5.36			PCB-153	ND	5.22		
PCB-111/115	ND	4.91			PCB-154	ND	9.18		
PCB-113	ND	6.00			PCB-155	ND	7.25		
PCB-114	ND	4.02			PCB-156	ND	4.81		
PCB-119	ND	4.85			PCB-157	ND	4.96		
PCB-120	ND	4.59			PCB-158/160	ND	5.15		
PCB-121	ND	5.16			PCB-159	ND	5.05		
PCB-122	ND	4.77			PCB-166	ND	5.41		
PCB-123	ND	5.64			PCB-167	ND	4.83		
PCB-124	ND	5.42			PCB-168	ND	4.60		
PCB-126	ND	4.69			PCB-169	ND	5.59		
PCB-127	ND	4.16			PCB-170	ND	5.14		
PCB-128/162	ND	5.97			PCB-171	ND	5.56		
PCB-129	ND	7.68			PCB-172	ND	5.98		
PCB-130	ND	7.45			PCB-173	ND	7.32		
PCB-131	ND	7.39			PCB-174	ND	6.28		
PCB-132/161	ND	5.58			PCB-175	ND	5.35		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank — EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-176	ND	3.85		
PCB-177	ND	6.39		
PCB-178	ND	5.21		
PCB-179	ND	4.02		
PCB-180	ND	5.58		
PCB-181	ND	6.00		
PCB-182/187	ND	4.93		
PCB-183	ND	4.57		
PCB-184	ND	4.18		
PCB-185	ND	5.76		
PCB-186	ND	3.84		
PCB-188	ND	3.68		
PCB-189	ND	3.89		
PCB-190	ND	3.82		
PCB-191	ND	4.35		
PCB-192	ND	4.65		
PCB-193	ND	4.37		
PCB-194	ND	4.13		
PCB-195	ND	4.67		
PCB-196/203	ND	7.41		
PCB-197	ND	5.26		
PCB-198	ND	8.14		
PCB-199	ND	8.28		
PCB-200	ND	5.93		
PCB-201	ND	5.60		
PCB-202	ND	6.02		
PCB-204	ND	5.72		
PCB-205	ND	3.31		
PCB-206	ND	5.25		
PCB-207	ND	3.00		
PCB-208	ND	3.04		
PCB-209	ND	4.18		
Total monoCB	ND	4.88		
Total diCB	ND	15.2		
Total triCB	ND	4.21		
Total tetraCB	8.90			
Total pentaCB	ND	9.51		
Total hexaCB	ND	10.5		
Total heptaCB	ND	7.32		
Total octaCB	ND	8.28		
Total nonaCB	ND	5.25		
DecaCB	ND	4.18		
Total PCB	8.90			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BLK1
Date Analyzed: 24-Jun-15 13:27 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	65.4	5 - 145	
	13C-PCB-3	67.7	5 - 145	
	13C-PCB-4	59.4	5 - 145	
	13C-PCB-11	66.1	5 - 145	
	13C-PCB-9	61.2	5 - 145	
	13C-PCB-19	58.2	5 - 145	
	13C-PCB-28	93.9	5 - 145	
	13C-PCB-32	59.4	5 - 145	
	13C-PCB-37	118	5 - 145	
	13C-PCB-47	74.2	5 - 145	
	13C-PCB-52	77.9	5 - 145	
	13C-PCB-54	68.3	5 - 145	
	13C-PCB-70	88.0	5 - 145	
	13C-PCB-77	83.5	10 - 145	
	13C-PCB-80	81.9	10 - 145	
	13C-PCB-81	78.9	10 - 145	
	13C-PCB-95	76.9	10 - 145	
	13C-PCB-97	82.1	10 - 145	
	13C-PCB-101	78.0	10 - 145	
	13C-PCB-104	82.2	10 - 145	
	13C-PCB-105	114	10 - 145	
	13C-PCB-114	103	10 - 145	
	13C-PCB-118	79.3	10 - 145	
	13C-PCB-123	81.1	10 - 145	
	13C-PCB-126	106	10 - 145	
	13C-PCB-127	112	10 - 145	
	13C-PCB-138	86.9	10 - 145	
	13C-PCB-141	91.5	10 - 145	
	13C-PCB-153	90.8	10 - 145	
	13C-PCB-155	51.4	10 - 145	
	13C-PCB-156	88.5	10 - 145	
	13C-PCB-157	87.3	10 - 145	
	13C-PCB-159	86.1	10 - 145	
	13C-PCB-167	89.4	10 - 145	
	13C-PCB-169	86.6	10 - 145	
	13C-PCB-170	79.8	10 - 145	
	13C-PCB-180	73.6	10 - 145	
	13C-PCB-188	80.1	10 - 145	
	13C-PCB-189	83.0	10 - 145	
	13C-PCB-194	78.4	10 - 145	
	13C-PCB-202	64.1	10 - 145	
	13C-PCB-206	83.5	10 - 145	
	13C-PCB-208	66.4	10 - 145	
	13C-PCB-209	81.5	10 - 145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BS1
Date Analyzed: 24-Jun-15 11:18 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/Sample)	Spike Amt	%R	Limits
PCB-1	1730	2000	86.5	60 - 135
PCB-3	1750	2000	87.3	60 - 135
PCB-4/10	4080	4000	102	60 - 135
PCB-15	2000	2000	100	60 - 135
PCB-19	2170	2000	109	60 - 135
PCB-37	2140	2000	107	60 - 135
PCB-54	2170	2000	108	60 - 135
PCB-77	2050	2000	102	60 - 135
PCB-81	2020	2000	101	60 - 135
PCB-104	2140	2000	107	60 - 135
PCB-105	1900	2000	95.0	60 - 135
PCB-106/118	4230	4000	106	60 - 135
PCB-114	1890	2000	94.6	60 - 135
PCB-123	2060	2000	103	60 - 135
PCB-126	1870	2000	93.4	60 - 135
PCB-155	2310	2000	115	60 - 135
PCB-156	1870	2000	93.3	60 - 135
PCB-157	1900	2000	95.2	60 - 135
PCB-167	1890	2000	94.7	60 - 135
PCB-169	1960	2000	98.1	60 - 135
PCB-188	2020	2000	101	60 - 135
PCB-189	2120	2000	106	60 - 135
PCB-202	2170	2000	109	60 - 135
PCB-205	2040	2000	102	60 - 135
PCB-206	2140	2000	107	60 - 135
PCB-208	2020	2000	101	60 - 135
PCB-209	2000	2000	100	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	47.9	15 - 145
IS	13C-PCB-3	60.2	15 - 145
IS	13C-PCB-4	48.4	15 - 145
IS	13C-PCB-11	67.1	15 - 145
IS	13C-PCB-9	51.8	15 - 145
IS	13C-PCB-19	56.2	15 - 145
IS	13C-PCB-28	85.2	15 - 145
IS	13C-PCB-32	62.4	15 - 145
IS	13C-PCB-37	101	15 - 145
IS	13C-PCB-47	69.9	15 - 145
IS	13C-PCB-52	71.8	15 - 145
IS	13C-PCB-54	61.8	15 - 145
IS	13C-PCB-70	78.2	15 - 145
IS	13C-PCB-77	88.6	40 - 145
IS	13C-PCB-80	77.6	40 - 145
IS	13C-PCB-81	84.1	40 - 145
IS	13C-PCB-95	70.7	40 - 145
IS	13C-PCB-97	78.7	40 - 145
IS	13C-PCB-101	72.4	40 - 145
IS	13C-PCB-104	63.9	40 - 145
IS	13C-PCB-105	103	40 - 145
IS	13C-PCB-114	94.9	40 - 145
IS	13C-PCB-118	80.8	40 - 145
IS	13C-PCB-123	82.3	40 - 145
IS	13C-PCB-126	107	40 - 145
IS	13C-PCB-127	104	40 - 145
IS	13C-PCB-138	88.4	40 - 145
IS	13C-PCB-141	87.8	40 - 145
IS	13C-PCB-153	86.5	40 - 145
IS	13C-PCB-155	46.8	40 - 145
IS	13C-PCB-156	92.1	40 - 145
IS	13C-PCB-157	92.3	40 - 145
IS	13C-PCB-159	88.5	40 - 145
IS	13C-PCB-167	90.3	40 - 145
IS	13C-PCB-169	94.2	40 - 145
IS	13C-PCB-170	76.1	40 - 145
IS	13C-PCB-180	75.4	40 - 145
IS	13C-PCB-188	73.6	40 - 145
IS	13C-PCB-189	79.5	40 - 145
IS	13C-PCB-194	80.7	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: SPME

QC Batch: B5F0093
Date Extracted: 23-Jun-2015 7:48

Lab Sample: B5F0093-BS1
Date Analyzed: 24-Jun-15 11:18 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/Sample)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	60.9	40 - 145
IS	13C-PCB-206	97.8	40 - 145
IS	13C-PCB-208	78.3	40 - 145
IS	13C-PCB-209	88.3	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: CP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 8:10

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-01 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 14:31 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	3.11			J
PCB-2	ND	2.55		
PCB-3	ND	2.54		
PCB-4/10	19.4			J
PCB-5/8	75.9			
PCB-6	19.0			
PCB-7/9	ND	7.82		
PCB-11	183			
PCB-12/13	ND	5.92		
PCB-14	ND	5.10		
PCB-15	22.4			
PCB-16/32	192			
PCB-17	104			
PCB-18	229			
PCB-19	30.1			
PCB-20/21/33	155			
PCB-22	91.0			
PCB-23	ND	1.74		
PCB-24/27	28.7			
PCB-25	40.9			
PCB-26	58.0			
PCB-28	447			
PCB-29	2.01			J
PCB-30	ND	1.55		
PCB-31	248			
PCB-34	3.05			J
PCB-35	10.2			
PCB-36	8.12			J
PCB-37	42.6			
PCB-38	6.79			J
PCB-39	ND	1.69		
PCB-40	116			
PCB-41/64/71/72	544			
PCB-42/59	233			
PCB-43/49	723			
PCB-44	676			
PCB-45	95.6			
PCB-46	53.5			
PCB-47	292			B
PCB-48/75	130			
PCB-50	5.36			J
PCB-51	66.7			
PCB-52/69	981			
PCB-53	180			
PCB-54	12.5			
PCB-55	10.6			
PCB-56/60	291			
PCB-57	4.53			J
PCB-58	2.80			J
PCB-61/70	598			
PCB-62	ND	2.01		
PCB-63	26.8			
PCB-65	ND	2.07		
PCB-66/76	564			
PCB-67	22.7			
PCB-68	7.50			J
PCB-73	ND		3.27	
PCB-74	268			
PCB-77	35.5			
PCB-78	ND	1.79		
PCB-79	17.6			
PCB-80	ND	1.51		
PCB-81	2.36			J
PCB-82	120			
PCB-83	ND	4.63		
PCB-84/92	512			
PCB-85/116	159			
PCB-86	ND		3.00	
PCB-87/117/125	318			
PCB-88/91	200			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 8:10

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-01 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 14:31 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	13.6			
PCB-90/101	1140			
PCB-93	ND	7.39		
PCB-94	12.9			
PCB-95/98/102	1020			
PCB-96	16.9			
PCB-97	320			
PCB-99	561			
PCB-100	11.4			
PCB-103	24.1			
PCB-104	ND	4.70		
PCB-105	156			
PCB-106/118	627			
PCB-107/109	60.6			
PCB-108/112	50.9			
PCB-110	909			
PCB-111/115	ND		12.8	
PCB-113	4.30			J
PCB-114	ND		9.08	
PCB-119	29.7			
PCB-120	5.27			J
PCB-121	ND	4.46		
PCB-122	6.94			J
PCB-123	ND		13.1	
PCB-124	32.2			
PCB-126	3.09			J
PCB-127	ND	3.63		
PCB-128/162	71.4			
PCB-129	20.4			
PCB-130	ND		34.2	
PCB-131	ND	4.34		
PCB-132/161	148			
PCB-133/142	19.8			J
PCB-134/143	40.2			
PCB-135	167			
PCB-136	124			
PCB-137	21.9			
PCB-138/163/164	542			
PCB-139/149	728			
PCB-140	ND	7.37		
PCB-141	79.8			
PCB-144	ND		32.0	
PCB-145	ND	5.24		
PCB-146/165	102			
PCB-147	ND		28.3	
PCB-148	ND	7.01		
PCB-150	ND	5.08		
PCB-151	216			
PCB-152	ND	4.90		
PCB-153	566			
PCB-154	27.0			
PCB-155	ND	4.78		
PCB-156	32.4			
PCB-157	9.34			J
PCB-158/160	47.3			
PCB-159	ND	2.92		
PCB-166	ND	3.13		
PCB-167	17.0			
PCB-168	ND	2.70		
PCB-169	ND	3.68		
PCB-170	54.0			
PCB-171	ND		19.1	
PCB-172	14.6			
PCB-173	ND	5.06		
PCB-174	96.6			
PCB-175	ND	3.51		
PCB-176	16.0			
PCB-177	57.7			
PCB-178	29.0			
PCB-179	66.5			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 8:10

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-01 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 14:31 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	151			
PCB-181	ND	4.14		
PCB-182/187	151			
PCB-183	50.3			
PCB-184	ND	2.75		
PCB-185	12.0			
PCB-186	ND	2.52		
PCB-188	ND	2.42		
PCB-189	ND	2.91		
PCB-190	11.6			
PCB-191	ND	3.00		
PCB-192	ND	3.22		
PCB-193	ND		8.24	
PCB-194	16.3			
PCB-195	7.58			J
PCB-196/203	34.7			
PCB-197	ND	6.21		
PCB-198	ND	9.62		
PCB-199	36.6			
PCB-200	ND	7.01		
PCB-201	ND	6.60		
PCB-202	17.4			
PCB-204	ND	6.75		
PCB-205	ND	2.81		
PCB-206	8.29			J
PCB-207	ND	2.05		
PCB-208	4.60			J
PCB-209	ND	3.21		
Total monoCB	3.11			
Total diCB	319			
Total triCB	1700			
Total tetraCB	5960			
Total pentaCB	6310		6350	
Total hexaCB	2980		3070	
Total heptaCB	710		737	

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	113			
Total nonaCB	12.9			
DecaCB	ND	3.21		
Total PCB	18100			B
13C-PCB-8	ND			
13C-PCB-31	59.5			
13C-PCB-79	623			
13C-PCB-133	1100			
13C-PCB-178	936			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: CP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 8:10

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-01 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 14:31 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	57.1	5 -145	
	13C-PCB-3	56.1	5 -145	
	13C-PCB-4	48.9	5 -145	
	13C-PCB-11	84.9	5 -145	
	13C-PCB-9	61.0	5 -145	
	13C-PCB-19	64.2	5 -145	
	13C-PCB-28	114	5 -145	
	13C-PCB-32	74.4	5 -145	
	13C-PCB-37	129	5 -145	
	13C-PCB-47	88.2	5 -145	
	13C-PCB-52	90.3	5 -145	
	13C-PCB-54	73.3	5 -145	
	13C-PCB-70	93.6	5 -145	
	13C-PCB-77	95.0	10 -145	
	13C-PCB-80	94.3	10 -145	
	13C-PCB-81	93.1	10 -145	
	13C-PCB-95	86.2	10 -145	
	13C-PCB-97	90.4	10 -145	
	13C-PCB-101	86.0	10 -145	
	13C-PCB-104	79.7	10 -145	
	13C-PCB-105	139	10 -145	
	13C-PCB-114	135	10 -145	
	13C-PCB-118	90.1	10 -145	
	13C-PCB-123	86.9	10 -145	
	13C-PCB-126	133	10 -145	
	13C-PCB-127	136	10 -145	
	13C-PCB-138	106	10 -145	
	13C-PCB-141	108	10 -145	
	13C-PCB-153	106	10 -145	
	13C-PCB-155	46.6	10 -145	
	13C-PCB-156	98.8	10 -145	
	13C-PCB-157	94.2	10 -145	
	13C-PCB-159	104	10 -145	
	13C-PCB-167	102	10 -145	
	13C-PCB-169	94.8	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	72.2	10 -145	
13C-PCB-180	71.0	10 -145	
13C-PCB-188	81.7	10 -145	
13C-PCB-189	72.3	10 -145	
13C-PCB-194	93.4	10 -145	
13C-PCB-202	55.7	10 -145	
13C-PCB-206	90.8	10 -145	
13C-PCB-208	85.7	10 -145	
13C-PCB-209	79.3	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: REF-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 9:55

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-02 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 15:35 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	2.97			J
PCB-2	ND	3.14		
PCB-3	ND	3.14		
PCB-4/10	12.6			J
PCB-5/8	62.1			
PCB-6	11.3			
PCB-7/9	ND	7.58		
PCB-11	183			
PCB-12/13	ND	6.53		
PCB-14	ND	5.62		
PCB-15	7.91			J
PCB-16/32	123			
PCB-17	70.8			
PCB-18	121			
PCB-19	13.9			
PCB-20/21/33	121			
PCB-22	52.8			
PCB-23	ND	1.73		
PCB-24/27	13.6			J
PCB-25	23.0			
PCB-26	29.6			
PCB-28	233			
PCB-29	1.37			J
PCB-30	ND	1.36		
PCB-31	133			
PCB-34	2.87			J
PCB-35	7.11			J
PCB-36	5.64			J
PCB-37	22.9			
PCB-38	4.09			J
PCB-39	ND	1.66		
PCB-40	60.9			
PCB-41/64/71/72	280			
PCB-42/59	119			
PCB-43/49	390			
PCB-44	311			
PCB-45	42.7			
PCB-46	27.5			
PCB-47	158			B
PCB-48/75	72.4			
PCB-50	2.56			J
PCB-51	30.4			
PCB-52/69	378			
PCB-53	70.3			
PCB-54	3.29			J
PCB-55	4.82			J
PCB-56/60	140			
PCB-57	2.30			J
PCB-58	2.62			J
PCB-61/70	258			
PCB-62	ND	1.80		
PCB-63	14.2			
PCB-65	ND	1.86		
PCB-66/76	291			
PCB-67	11.2			
PCB-68	6.34			J
PCB-73	ND	1.95		
PCB-74	127			
PCB-77	15.4			
PCB-78	ND	1.62		
PCB-79	8.29			J
PCB-80	ND	1.41		
PCB-81	1.28			J
PCB-82	42.5			
PCB-83	ND	4.61		
PCB-84/92	191			
PCB-85/116	71.0			
PCB-86	ND	7.42		
PCB-87/117/125	100			
PCB-88/91	86.5			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: REF-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 9:55

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-02 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 15:35 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	7.05			J
PCB-90/101	422			
PCB-93	ND	7.02		
PCB-94	6.41			J
PCB-95/98/102	351			
PCB-96	8.41			J
PCB-97	123			
PCB-99	272			
PCB-100	6.79			J
PCB-103	ND		11.2	
PCB-104	ND	4.50		
PCB-105	66.9			
PCB-106/118	259			
PCB-107/109	31.0			
PCB-108/112	23.2			
PCB-110	327			
PCB-111/115	4.61			J
PCB-113	ND	4.77		
PCB-114	4.16			J
PCB-119	15.6			
PCB-120	3.71			J
PCB-121	ND	4.23		
PCB-122	3.27			J
PCB-123	6.97			J
PCB-124	ND		9.13	
PCB-126	ND		1.77	
PCB-127	ND	2.36		
PCB-128/162	35.1			
PCB-129	6.58			J
PCB-130	18.0			
PCB-131	ND	3.48		
PCB-132/161	65.3			
PCB-133/142	11.1			J
PCB-134/143	15.1			J
PCB-135	56.1			
PCB-136	49.1			
PCB-137	5.42			J
PCB-138/163/164	229			
PCB-139/149	298			
PCB-140	ND	5.89		
PCB-141	29.9			
PCB-144	12.8			
PCB-145	ND	4.19		
PCB-146/165	52.3			
PCB-147	14.6			
PCB-148	ND	5.60		
PCB-150	ND	4.06		
PCB-151	105			
PCB-152	ND	3.92		
PCB-153	263			
PCB-154	10.6			
PCB-155	ND	3.82		
PCB-156	13.3			
PCB-157	ND		4.14	
PCB-158/160	17.7			J
PCB-159	ND	2.36		
PCB-166	ND	2.53		
PCB-167	7.59			J
PCB-168	ND	2.17		
PCB-169	ND	3.05		
PCB-170	24.6			
PCB-171	9.85			J
PCB-172	7.80			J
PCB-173	ND	3.62		
PCB-174	47.2			
PCB-175	ND	2.57		
PCB-176	7.76			J
PCB-177	31.6			
PCB-178	18.9			
PCB-179	44.7			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: REF-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 9:55

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-02 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 15:35 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	64.3			
PCB-181	ND	2.96		
PCB-182/187	86.1			
PCB-183	24.8			
PCB-184	ND	2.01		
PCB-185	7.41			J
PCB-186	ND	1.85		
PCB-188	ND	1.77		
PCB-189	ND	2.10		
PCB-190	5.84			J
PCB-191	2.75			J
PCB-192	ND	2.30		
PCB-193	5.91			J
PCB-194	10.2			
PCB-195	ND		4.02	
PCB-196/203	15.3			J
PCB-197	ND	4.58		
PCB-198	ND	7.09		
PCB-199	ND		17.9	
PCB-200	ND	5.17		
PCB-201	5.20			J
PCB-202	11.3			
PCB-204	ND	4.98		
PCB-205	ND	1.75		
PCB-206	5.30			J
PCB-207	ND	1.84		
PCB-208	2.15			J
PCB-209	ND	3.38		
Total monoCB	2.97			
Total diCB	277			
Total triCB	979			
Total tetraCB	2830			B
Total pentaCB	2430		2460	
Total hexaCB	1320			
Total heptaCB	389			
Total octaCB	42.1		64.0	
Total nonaCB	7.46			
DecaCB	ND	3.38		
Total PCB	8280			B
13C-PCB-8	45.0			
13C-PCB-31	454			
13C-PCB-79	1450			
13C-PCB-133	1300			
13C-PCB-178	1010			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: REF-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 9:55

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-02 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 15:35 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	59.2	5 -145	
	13C-PCB-3	61.7	5 -145	
	13C-PCB-4	57.6	5 -145	
	13C-PCB-11	86.0	5 -145	
	13C-PCB-9	68.0	5 -145	
	13C-PCB-19	68.9	5 -145	
	13C-PCB-28	111	5 -145	
	13C-PCB-32	78.7	5 -145	
	13C-PCB-37	128	5 -145	
	13C-PCB-47	85.5	5 -145	
	13C-PCB-52	84.0	5 -145	
	13C-PCB-54	70.4	5 -145	
	13C-PCB-70	91.4	5 -145	
	13C-PCB-77	91.5	10 -145	
	13C-PCB-80	89.5	10 -145	
	13C-PCB-81	90.8	10 -145	
	13C-PCB-95	87.8	10 -145	
	13C-PCB-97	91.2	10 -145	
	13C-PCB-101	90.4	10 -145	
	13C-PCB-104	82.1	10 -145	
	13C-PCB-105	136	10 -145	
	13C-PCB-114	130	10 -145	
	13C-PCB-118	92.7	10 -145	
	13C-PCB-123	92.7	10 -145	
	13C-PCB-126	129	10 -145	
	13C-PCB-127	136	10 -145	
	13C-PCB-138	102	10 -145	
	13C-PCB-141	102	10 -145	
	13C-PCB-153	103	10 -145	
	13C-PCB-155	47.5	10 -145	
	13C-PCB-156	94.3	10 -145	
	13C-PCB-157	91.3	10 -145	
	13C-PCB-159	101	10 -145	
	13C-PCB-167	98.1	10 -145	
	13C-PCB-169	87.8	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	66.4	10 -145	
13C-PCB-180	69.3	10 -145	
13C-PCB-188	79.2	10 -145	
13C-PCB-189	68.7	10 -145	
13C-PCB-194	92.5	10 -145	
13C-PCB-202	52.9	10 -145	
13C-PCB-206	84.1	10 -145	
13C-PCB-208	80.8	10 -145	
13C-PCB-209	76.8	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-03 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 16:40 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	6.63			J
PCB-2	2.52			J
PCB-3	ND	2.82		
PCB-4/10	34.3			
PCB-5/8	177			
PCB-6	37.7			
PCB-7/9	15.4			J
PCB-11	299			
PCB-12/13	ND	10.7		
PCB-14	ND	9.18		
PCB-15	29.3			
PCB-16/32	315			
PCB-17	193			
PCB-18	349			
PCB-19	41.5			
PCB-20/21/33	285			
PCB-22	141			
PCB-23	ND	1.96		
PCB-24/27	40.5			
PCB-25	65.6			
PCB-26	78.0			
PCB-28	630			
PCB-29	3.71			J
PCB-30	ND	1.48		
PCB-31	370			
PCB-34	ND		4.86	
PCB-35	12.6			
PCB-36	6.50			J
PCB-37	51.3			
PCB-38	8.83			J
PCB-39	1.85			J
PCB-40	151			
PCB-41/64/71/72	694			
PCB-42/59	300			
PCB-43/49	921			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	810			
PCB-45	113			
PCB-46	65.3			
PCB-47	351			B
PCB-48/75	179			
PCB-50	6.27			J
PCB-51	64.0			
PCB-52/69	1040			
PCB-53	192			
PCB-54	8.59			J
PCB-55	14.4			
PCB-56/60	332			
PCB-57	4.94			J
PCB-58	ND		4.00	
PCB-61/70	676			
PCB-62	ND	2.48		
PCB-63	32.2			
PCB-65	ND	2.56		
PCB-66/76	695			
PCB-67	22.0			
PCB-68	10.7			
PCB-73	ND		3.79	
PCB-74	315			
PCB-77	31.0			
PCB-78	ND	2.22		
PCB-79	18.4			
PCB-80	ND	1.89		
PCB-81	2.32			J
PCB-82	115			
PCB-83	ND	3.86		
PCB-84/92	528			
PCB-85/116	180			
PCB-86	5.29			J
PCB-87/117/125	312			
PCB-88/91	224			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-03 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 16:40 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	ND		11.7	
PCB-90/101	1190			
PCB-93	ND	5.89		
PCB-94	12.0			
PCB-95/98/102	1030			
PCB-96	16.7			
PCB-97	352			
PCB-99	663			
PCB-100	10.2			
PCB-103	29.1			
PCB-104	ND	3.75		
PCB-105	172			
PCB-106/118	675			
PCB-107/109	67.9			
PCB-108/112	59.4			
PCB-110	1000			
PCB-111/115	12.1			J
PCB-113	4.38			J
PCB-114	9.30			J
PCB-119	36.0			
PCB-120	7.48			J
PCB-121	ND	3.55		
PCB-122	7.25			J
PCB-123	12.8			
PCB-124	31.4			
PCB-126	ND		2.02	
PCB-127	ND	2.34		
PCB-128/162	78.0			
PCB-129	19.8			
PCB-130	46.5			
PCB-131	ND	3.08		
PCB-132/161	166			
PCB-133/142	22.9			
PCB-134/143	43.2			
PCB-135	147			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	151			
PCB-137	21.2			
PCB-138/163/164	607			
PCB-139/149	824			
PCB-140	8.15			J
PCB-141	82.7			
PCB-144	40.7			
PCB-145	ND	7.02		
PCB-146/165	120			
PCB-147	29.3			
PCB-148	4.83			J
PCB-150	ND	6.80		
PCB-151	252			
PCB-152	ND	6.57		
PCB-153	672			
PCB-154	24.6			
PCB-155	ND	6.40		
PCB-156	33.2			
PCB-157	7.34			J
PCB-158/160	50.9			
PCB-159	ND	2.16		
PCB-166	ND	2.31		
PCB-167	18.5			
PCB-168	ND	1.92		
PCB-169	ND	3.01		
PCB-170	70.5			
PCB-171	ND		23.8	
PCB-172	17.7			
PCB-173	ND	4.68		
PCB-174	120			
PCB-175	5.55			J
PCB-176	18.0			
PCB-177	75.4			
PCB-178	34.8			
PCB-179	82.5			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-03 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 16:40 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	185			
PCB-181	ND	3.83		
PCB-182/187	195			
PCB-183	56.6			
PCB-184	ND	2.29		
PCB-185	16.8			
PCB-186	ND	2.10		
PCB-188	ND	2.01		
PCB-189	3.09			J
PCB-190	12.5			
PCB-191	3.47			J
PCB-192	ND	2.97		
PCB-193	10.8			
PCB-194	23.9			
PCB-195	10.8			
PCB-196/203	ND		38.8	
PCB-197	ND	4.38		
PCB-198	ND	6.78		
PCB-199	56.2			
PCB-200	6.07			J
PCB-201	6.37			J
PCB-202	ND		16.5	
PCB-204	ND	4.76		
PCB-205	ND	2.34		
PCB-206	13.0			
PCB-207	ND	2.36		
PCB-208	6.49			J
PCB-209	ND		4.94	
Total monoCB	9.15			
Total diCB	592			
Total triCB	2590		2600	
Total tetraCB	7050			B
Total pentaCB	6760		6770	
Total hexaCB	3470			
Total heptaCB	908		932	
Total octaCB	103		159	
Total nonaCB	19.5			
DecaCB	ND		4.94	
Total PCB	21500			B
13C-PCB-8	42.0			
13C-PCB-31	435			
13C-PCB-79	1040			
13C-PCB-133	794			
13C-PCB-178	573			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-03 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 16:40 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	54.7	5 -145	
	13C-PCB-3	59.0	5 -145	
	13C-PCB-4	52.6	5 -145	
	13C-PCB-11	81.1	5 -145	
	13C-PCB-9	63.1	5 -145	
	13C-PCB-19	63.5	5 -145	
	13C-PCB-28	108	5 -145	
	13C-PCB-32	74.5	5 -145	
	13C-PCB-37	125	5 -145	
	13C-PCB-47	84.5	5 -145	
	13C-PCB-52	83.4	5 -145	
	13C-PCB-54	68.1	5 -145	
	13C-PCB-70	88.6	5 -145	
	13C-PCB-77	90.2	10 -145	
	13C-PCB-80	89.8	10 -145	
	13C-PCB-81	89.0	10 -145	
	13C-PCB-95	83.1	10 -145	
	13C-PCB-97	87.3	10 -145	
	13C-PCB-101	82.9	10 -145	
	13C-PCB-104	78.2	10 -145	
	13C-PCB-105	139	10 -145	
	13C-PCB-114	136	10 -145	
	13C-PCB-118	88.7	10 -145	
	13C-PCB-123	87.5	10 -145	
	13C-PCB-126	133	10 -145	
	13C-PCB-127	138	10 -145	
	13C-PCB-138	103	10 -145	
	13C-PCB-141	105	10 -145	
	13C-PCB-153	110	10 -145	
	13C-PCB-155	43.3	10 -145	
	13C-PCB-156	86.8	10 -145	
	13C-PCB-157	87.4	10 -145	
	13C-PCB-159	101	10 -145	
	13C-PCB-167	95.1	10 -145	
	13C-PCB-169	81.0	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	65.8	10 -145	
13C-PCB-180	66.5	10 -145	
13C-PCB-188	82.3	10 -145	
13C-PCB-189	70.3	10 -145	
13C-PCB-194	83.2	10 -145	
13C-PCB-202	51.5	10 -145	
13C-PCB-206	77.2	10 -145	
13C-PCB-208	69.4	10 -145	
13C-PCB-209	69.2	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:40

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-04 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 17:44 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	4.63			J
PCB-2	ND	5.78		
PCB-3	ND	5.77		
PCB-4/10	25.7			
PCB-5/8	135			
PCB-6	28.2			
PCB-7/9	ND	13.4		
PCB-11	254			
PCB-12/13	ND	11.1		
PCB-14	ND	9.54		
PCB-15	20.8			
PCB-16/32	226			
PCB-17	128			
PCB-18	243			
PCB-19	29.0			
PCB-20/21/33	223			
PCB-22	103			
PCB-23	ND	2.36		
PCB-24/27	29.0			
PCB-25	46.4			
PCB-26	61.8			
PCB-28	472			
PCB-29	2.57			J
PCB-30	ND	1.88		
PCB-31	258			
PCB-34	ND		3.46	
PCB-35	ND		10.8	
PCB-36	ND		6.90	
PCB-37	46.2			
PCB-38	6.26			J
PCB-39	ND	2.11		
PCB-40	106			
PCB-41/64/71/72	491			
PCB-42/59	210			
PCB-43/49	652			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	585			
PCB-45	76.1			
PCB-46	43.6			
PCB-47	272			B
PCB-48/75	131			
PCB-50	ND		3.75	
PCB-51	44.1			
PCB-52/69	745			
PCB-53	132			
PCB-54	5.72			J
PCB-55	ND		7.50	
PCB-56/60	242			
PCB-57	ND		3.12	
PCB-58	3.26			J
PCB-61/70	500			
PCB-62	ND	2.50		
PCB-63	25.6			
PCB-65	ND	2.58		
PCB-66/76	506			
PCB-67	18.1			
PCB-68	ND		8.20	
PCB-73	4.64			J
PCB-74	228			
PCB-77	26.1			
PCB-78	ND	2.12		
PCB-79	ND		10.8	
PCB-80	ND	1.75		
PCB-81	3.25			J
PCB-82	91.6			
PCB-83	ND	4.86		
PCB-84/92	360			
PCB-85/116	128			
PCB-86	ND	7.81		
PCB-87/117/125	220			
PCB-88/91	156			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:40

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-04 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 17:44 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	12.8			
PCB-90/101	848			
PCB-93	ND	7.52		
PCB-94	9.52			J
PCB-95/98/102	728			
PCB-96	10.2			
PCB-97	259			
PCB-99	479			
PCB-100	10.2			
PCB-103	18.7			
PCB-104	ND	4.59		
PCB-105	126			
PCB-106/118	514			
PCB-107/109	56.9			
PCB-108/112	41.9			
PCB-110	697			
PCB-111/115	10.0			J
PCB-113	4.53			J
PCB-114	5.04			J
PCB-119	28.4			
PCB-120	5.56			J
PCB-121	ND	4.54		
PCB-122	ND		3.84	
PCB-123	ND		12.2	
PCB-124	25.3			
PCB-126	ND		1.48	
PCB-127	ND	3.25		
PCB-128/162	62.9			
PCB-129	15.3			
PCB-130	34.0			
PCB-131	ND	4.97		
PCB-132/161	125			
PCB-133/142	15.4			J
PCB-134/143	ND		25.8	
PCB-135	123			
PCB-136	118			
PCB-137	18.2			
PCB-138/163/164	459			
PCB-139/149	586			
PCB-140	ND	11.4		
PCB-141	64.2			
PCB-144	27.9			
PCB-145	ND	8.10		
PCB-146/165	92.2			
PCB-147	21.2			
PCB-148	ND	10.8		
PCB-150	ND	7.85		
PCB-151	188			
PCB-152	ND	7.58		
PCB-153	528			
PCB-154	24.5			
PCB-155	ND	7.39		
PCB-156	24.3			
PCB-157	6.36			J
PCB-158/160	34.3			
PCB-159	ND	3.37		
PCB-166	ND	3.61		
PCB-167	14.7			
PCB-168	ND	3.10		
PCB-169	ND	4.58		
PCB-170	56.2			
PCB-171	19.3			
PCB-172	11.3			
PCB-173	ND	5.61		
PCB-174	93.1			
PCB-175	5.31			J
PCB-176	17.5			
PCB-177	58.3			
PCB-178	26.0			
PCB-179	68.3			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:40

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-04 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 17:44 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	144			
PCB-181	ND	4.59		
PCB-182/187	138			
PCB-183	47.7			
PCB-184	ND	2.85		
PCB-185	ND		10.4	
PCB-186	ND	2.62		
PCB-188	ND	2.51		
PCB-189	ND	3.13		
PCB-190	12.0			
PCB-191	3.83			J
PCB-192	ND	3.57		
PCB-193	8.64			J
PCB-194	19.2			
PCB-195	8.49			J
PCB-196/203	32.7			
PCB-197	ND	5.90		
PCB-198	ND	9.13		
PCB-199	45.3			
PCB-200	ND	6.65		
PCB-201	ND	6.28		
PCB-202	ND		18.4	
PCB-204	ND	6.41		
PCB-205	ND	2.81		
PCB-206	11.5			
PCB-207	ND	3.06		
PCB-208	ND		3.78	
PCB-209	ND	5.77		
Total monoCB	4.63			
Total diCB	464			
Total triCB	1870		1900	
Total tetraCB	5050		5080	B
Total pentaCB	4850		4860	
Total hexaCB	2580		2610	
Total heptaCB	709		719	
Total octaCB	106		124	
Total nonaCB	11.5		15.3	
DecaCB	ND	5.77		
Total PCB	15600			B
13C-PCB-8	45.4			
13C-PCB-31	515			
13C-PCB-79	1570			
13C-PCB-133	1570			
13C-PCB-178	1150			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 11:40

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-04 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 17:44 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	54.1	5 -145	
	13C-PCB-3	56.5	5 -145	
	13C-PCB-4	51.5	5 -145	
	13C-PCB-11	77.0	5 -145	
	13C-PCB-9	59.8	5 -145	
	13C-PCB-19	58.6	5 -145	
	13C-PCB-28	106	5 -145	
	13C-PCB-32	73.2	5 -145	
	13C-PCB-37	131	5 -145	
	13C-PCB-47	84.6	5 -145	
	13C-PCB-52	87.0	5 -145	
	13C-PCB-54	64.6	5 -145	
	13C-PCB-70	93.8	5 -145	
	13C-PCB-77	94.9	10 -145	
	13C-PCB-80	94.1	10 -145	
	13C-PCB-81	92.7	10 -145	
	13C-PCB-95	80.9	10 -145	
	13C-PCB-97	87.0	10 -145	
	13C-PCB-101	84.1	10 -145	
	13C-PCB-104	79.3	10 -145	
	13C-PCB-105	142	10 -145	
	13C-PCB-114	128	10 -145	
	13C-PCB-118	87.1	10 -145	
	13C-PCB-123	85.3	10 -145	
	13C-PCB-126	127	10 -145	
	13C-PCB-127	141	10 -145	
	13C-PCB-138	103	10 -145	
	13C-PCB-141	107	10 -145	
	13C-PCB-153	105	10 -145	
	13C-PCB-155	44.0	10 -145	
	13C-PCB-156	98.0	10 -145	
	13C-PCB-157	92.6	10 -145	
	13C-PCB-159	99.0	10 -145	
	13C-PCB-167	98.2	10 -145	
	13C-PCB-169	84.8	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	71.8	10 -145	
13C-PCB-180	71.0	10 -145	
13C-PCB-188	85.5	10 -145	
13C-PCB-189	73.7	10 -145	
13C-PCB-194	91.4	10 -145	
13C-PCB-202	55.0	10 -145	
13C-PCB-206	77.2	10 -145	
13C-PCB-208	70.4	10 -145	
13C-PCB-209	74.0	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: SP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 12:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-05 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 18:49 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	3.15			J
PCB-2	ND	2.46		
PCB-3	ND	2.45		
PCB-4/10	19.3			J
PCB-5/8	84.0			
PCB-6	19.4			
PCB-7/9	ND	8.60		
PCB-11	274			
PCB-12/13	ND	7.21		
PCB-14	ND	6.21		
PCB-15	10.9			
PCB-16/32	192			
PCB-17	121			
PCB-18	209			
PCB-19	19.7			
PCB-20/21/33	224			
PCB-22	93.7			
PCB-23	ND	1.46		
PCB-24/27	25.4			
PCB-25	47.4			
PCB-26	59.2			
PCB-28	448			
PCB-29	3.17			J
PCB-30	ND	0.997		
PCB-31	240			
PCB-34	5.54			J
PCB-35	12.4			
PCB-36	11.8			
PCB-37	33.1			
PCB-38	7.84			J
PCB-39	1.19			J
PCB-40	124			
PCB-41/64/71/72	568			
PCB-42/59	249			
PCB-43/49	746			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	669			
PCB-45	87.4			
PCB-46	52.7			
PCB-47	322			B
PCB-48/75	155			
PCB-50	4.91			J
PCB-51	51.1			
PCB-52/69	818			
PCB-53	144			
PCB-54	6.38			J
PCB-55	9.07			J
PCB-56/60	306			
PCB-57	5.19			J
PCB-58	4.34			J
PCB-61/70	612			
PCB-62	ND	4.41		
PCB-63	32.4			
PCB-65	ND	4.54		
PCB-66/76	632			
PCB-67	26.9			
PCB-68	11.4			
PCB-73	3.58			J
PCB-74	271			
PCB-77	31.6			
PCB-78	ND	3.82		
PCB-79	19.4			
PCB-80	ND	3.33		
PCB-81	1.11			J
PCB-82	108			
PCB-83	ND	1.82		
PCB-84/92	411			
PCB-85/116	160			
PCB-86	ND	2.94		
PCB-87/117/125	234			
PCB-88/91	189			

DL - Sample specifc estimated detection limit LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: SP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 12:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-05 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 18:49 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	13.8			
PCB-90/101	980			
PCB-93	ND	3.99		
PCB-94	11.7			
PCB-95/98/102	765			
PCB-96	14.0			
PCB-97	293			
PCB-99	602			
PCB-100	10.4			
PCB-103	21.9			
PCB-104	ND	2.45		
PCB-105	168			
PCB-106/118	621			
PCB-107/109	78.4			
PCB-108/112	50.6			
PCB-110	787			
PCB-111/115	8.44			J
PCB-113	3.36			J
PCB-114	9.62			J
PCB-119	32.4			
PCB-120	7.24			J
PCB-121	ND	2.40		
PCB-122	7.49			J
PCB-123	12.5			
PCB-124	30.7			
PCB-126	5.65			J
PCB-127	ND	3.85		
PCB-128/162	81.1			
PCB-129	22.6			
PCB-130	ND		35.3	
PCB-131	ND	3.13		
PCB-132/161	141			
PCB-133/142	20.2			
PCB-134/143	33.4			
PCB-135	124			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	117			
PCB-137	18.2			
PCB-138/163/164	584			
PCB-139/149	698			
PCB-140	6.26			J
PCB-141	70.5			
PCB-144	ND		32.3	
PCB-145	ND	6.58		
PCB-146/165	110			
PCB-147	29.6			
PCB-148	ND	8.80		
PCB-150	4.24			J
PCB-151	204			
PCB-152	ND	6.16		
PCB-153	584			
PCB-154	23.8			
PCB-155	ND	6.01		
PCB-156	34.2			
PCB-157	10.5			
PCB-158/160	46.2			
PCB-159	ND	2.24		
PCB-166	ND	2.88		
PCB-167	19.4			
PCB-168	ND	1.95		
PCB-169	ND	2.67		
PCB-170	58.5			
PCB-171	21.7			
PCB-172	16.7			
PCB-173	2.85			J
PCB-174	87.7			
PCB-175	ND	3.17		
PCB-176	12.2			
PCB-177	70.0			
PCB-178	29.1			
PCB-179	64.9			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: SP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 12:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-05 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 18:49 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	145			
PCB-181	ND	3.92		
PCB-182/187	156			
PCB-183	48.4			
PCB-184	ND	2.48		
PCB-185	8.14			J
PCB-186	ND	2.28		
PCB-188	ND	2.18		
PCB-189	ND	1.46		
PCB-190	12.8			
PCB-191	ND		2.99	
PCB-192	ND	3.04		
PCB-193	11.7			
PCB-194	ND		17.1	
PCB-195	ND		6.18	
PCB-196/203	37.4			
PCB-197	ND	3.39		
PCB-198	ND	5.25		
PCB-199	35.7			
PCB-200	5.67			J
PCB-201	7.47			J
PCB-202	17.5			
PCB-204	ND	3.68		
PCB-205	ND	3.30		
PCB-206	7.89			J
PCB-207	ND	2.43		
PCB-208	3.84			J
PCB-209	ND		2.68	
Total monoCB	3.15			
Total diCB	408			
Total triCB	1750			
Total tetraCB	5960			
Total pentaCB	5640			
Total hexaCB	2980		3050	
Total heptaCB	746		749	

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	104		127	
Total nonaCB	11.7			
DecaCB	ND		2.68	
Total PCB	17600			B
13C-PCB-8	ND			
13C-PCB-31	26.4			
13C-PCB-79	326			
13C-PCB-133	625			
13C-PCB-178	538			

DL - Sample specifc estimated detection limit LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: SP-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 12:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-05 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 18:49 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	54.5	5 -145	
	13C-PCB-3	55.6	5 -145	
	13C-PCB-4	50.4	5 -145	
	13C-PCB-11	75.8	5 -145	
	13C-PCB-9	57.8	5 -145	
	13C-PCB-19	56.2	5 -145	
	13C-PCB-28	105	5 -145	
	13C-PCB-32	71.2	5 -145	
	13C-PCB-37	131	5 -145	
	13C-PCB-47	83.9	5 -145	
	13C-PCB-52	86.4	5 -145	
	13C-PCB-54	70.1	5 -145	
	13C-PCB-70	88.9	5 -145	
	13C-PCB-77	96.6	10 -145	
	13C-PCB-80	91.8	10 -145	
	13C-PCB-81	92.9	10 -145	
	13C-PCB-95	78.7	10 -145	
	13C-PCB-97	92.5	10 -145	
	13C-PCB-101	84.8	10 -145	
	13C-PCB-104	75.3	10 -145	
	13C-PCB-105	141	10 -145	
	13C-PCB-114	133	10 -145	
	13C-PCB-118	92.9	10 -145	
	13C-PCB-123	88.8	10 -145	
	13C-PCB-126	128	10 -145	
	13C-PCB-127	140	10 -145	
	13C-PCB-138	100	10 -145	
	13C-PCB-141	107	10 -145	
	13C-PCB-153	107	10 -145	
	13C-PCB-155	44.9	10 -145	
	13C-PCB-156	90.4	10 -145	
	13C-PCB-157	87.0	10 -145	
	13C-PCB-159	99.9	10 -145	
	13C-PCB-167	94.7	10 -145	
	13C-PCB-169	91.4	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	73.6	10 -145	
13C-PCB-180	72.0	10 -145	
13C-PCB-188	81.9	10 -145	
13C-PCB-189	76.8	10 -145	
13C-PCB-194	87.5	10 -145	
13C-PCB-202	51.6	10 -145	
13C-PCB-206	86.1	10 -145	
13C-PCB-208	79.1	10 -145	
13C-PCB-209	78.5	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: LARE-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 13:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-06 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 19:53 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	6.32			J
PCB-2	ND		2.21	
PCB-3	ND	3.11		
PCB-4/10	70.3			
PCB-5/8	294			
PCB-6	78.0			
PCB-7/9	28.3			
PCB-11	312			
PCB-12/13	9.06			J
PCB-14	ND	4.13		
PCB-15	37.2			
PCB-16/32	784			
PCB-17	528			
PCB-18	1210			
PCB-19	110			
PCB-20/21/33	761			
PCB-22	409			
PCB-23	1.49			J
PCB-24/27	114			
PCB-25	188			
PCB-26	297			
PCB-28	1520			
PCB-29	10.2			
PCB-30	ND	1.93		
PCB-31	1100			
PCB-34	14.0			
PCB-35	15.9			
PCB-36	6.42			J
PCB-37	107			
PCB-38	19.4			
PCB-39	2.61			J
PCB-40	383			
PCB-41/64/71/72	1760			
PCB-42/59	697			
PCB-43/49	1900			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	2200			
PCB-45	342			
PCB-46	178			
PCB-47	753			B
PCB-48/75	478			
PCB-50	13.0			
PCB-51	137			
PCB-52/69	2600			
PCB-53	481			
PCB-54	14.8			
PCB-55	19.0			
PCB-56/60	779			
PCB-57	12.1			
PCB-58	6.35			J
PCB-61/70	1350			
PCB-62	ND	2.86		
PCB-63	72.2			
PCB-65	ND	2.95		
PCB-66/76	1180			
PCB-67	46.0			
PCB-68	15.3			
PCB-73	8.43			J
PCB-74	642			
PCB-77	62.6			
PCB-78	ND	2.37		
PCB-79	ND		19.5	
PCB-80	ND	2.07		
PCB-81	2.88			J
PCB-82	225			
PCB-83	ND	4.78		
PCB-84/92	769			
PCB-85/116	279			
PCB-86	10.5			
PCB-87/117/125	530			
PCB-88/91	306			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: LARE-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 13:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-06 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 19:53 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	36.8			
PCB-90/101	1560			
PCB-93	ND	7.32		
PCB-94	ND		15.4	
PCB-95/98/102	1550			
PCB-96	31.3			
PCB-97	496			
PCB-99	724			
PCB-100	10.2			
PCB-103	28.3			
PCB-104	ND	2.16		
PCB-105	276			
PCB-106/118	895			
PCB-107/109	90.9			
PCB-108/112	87.0			
PCB-110	1550			
PCB-111/115	28.4			
PCB-113	5.28			J
PCB-114	18.3			
PCB-119	42.0			
PCB-120	4.20			J
PCB-121	ND	4.41		
PCB-122	11.0			
PCB-123	20.1			
PCB-124	49.2			
PCB-126	6.85			J
PCB-127	ND	3.08		
PCB-128/162	113			
PCB-129	37.5			
PCB-130	58.5			
PCB-131	ND	3.58		
PCB-132/161	235			
PCB-133/142	29.7			
PCB-134/143	52.0			
PCB-135	158			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	177			
PCB-137	36.4			
PCB-138/163/164	812			
PCB-139/149	1000			
PCB-140	ND		7.09	
PCB-141	139			
PCB-144	65.2			
PCB-145	ND	3.84		
PCB-146/165	130			
PCB-147	29.0			
PCB-148	ND	5.13		
PCB-150	3.25			J
PCB-151	306			
PCB-152	ND	3.59		
PCB-153	738			
PCB-154	21.1			
PCB-155	3.31			J
PCB-156	52.5			
PCB-157	13.2			
PCB-158/160	85.1			
PCB-159	ND	2.26		
PCB-166	ND	2.42		
PCB-167	24.8			
PCB-168	ND	2.23		
PCB-169	ND	1.62		
PCB-170	101			
PCB-171	40.0			
PCB-172	22.8			
PCB-173	5.41			J
PCB-174	170			
PCB-175	8.00			J
PCB-176	20.9			
PCB-177	92.6			
PCB-178	37.3			
PCB-179	87.9			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: LARE-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 13:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-06 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 19:53 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	268			
PCB-181	ND	3.42		
PCB-182/187	ND		196	
PCB-183	80.7			
PCB-184	2.58			J
PCB-185	21.2			
PCB-186	ND	2.01		
PCB-188	ND	1.93		
PCB-189	3.78			J
PCB-190	22.1			
PCB-191	5.34			J
PCB-192	ND	2.66		
PCB-193	14.9			
PCB-194	28.9			
PCB-195	12.2			
PCB-196/203	56.1			
PCB-197	ND	2.50		
PCB-198	ND	4.91		
PCB-199	59.9			
PCB-200	7.24			J
PCB-201	11.7			
PCB-202	21.2			
PCB-204	ND	3.45		
PCB-205	ND	1.72		
PCB-206	ND		15.8	
PCB-207	2.52			J
PCB-208	8.30			J
PCB-209	8.82			J
Total monoCB	6.32		8.53	
Total diCB	829			
Total triCB	7200			
Total tetraCB	16100			B
Total pentaCB	9640		9660	
Total hexaCB	4320		4330	
Total heptaCB	1000		1200	
Total octaCB	197			
Total nonaCB	10.8		26.6	
DecaCB	8.82			
Total PCB	39300			B
13C-PCB-8	15.5			
13C-PCB-31	412			
13C-PCB-79	1360			
13C-PCB-133	1340			
13C-PCB-178	1080			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: LARE-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 13:20

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-06 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 24-Jun-15 19:53 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	57.6	5 -145	
	13C-PCB-3	62.5	5 -145	
	13C-PCB-4	56.2	5 -145	
	13C-PCB-11	83.7	5 -145	
	13C-PCB-9	66.5	5 -145	
	13C-PCB-19	63.6	5 -145	
	13C-PCB-28	104	5 -145	
	13C-PCB-32	72.7	5 -145	
	13C-PCB-37	128	5 -145	
	13C-PCB-47	82.2	5 -145	
	13C-PCB-52	86.8	5 -145	
	13C-PCB-54	66.8	5 -145	
	13C-PCB-70	91.7	5 -145	
	13C-PCB-77	92.0	10 -145	
	13C-PCB-80	92.4	10 -145	
	13C-PCB-81	93.7	10 -145	
	13C-PCB-95	81.7	10 -145	
	13C-PCB-97	86.1	10 -145	
	13C-PCB-101	85.4	10 -145	
	13C-PCB-104	78.0	10 -145	
	13C-PCB-105	129	10 -145	
	13C-PCB-114	127	10 -145	
	13C-PCB-118	87.9	10 -145	
	13C-PCB-123	84.6	10 -145	
	13C-PCB-126	127	10 -145	
	13C-PCB-127	132	10 -145	
	13C-PCB-138	98.1	10 -145	
	13C-PCB-141	98.2	10 -145	
	13C-PCB-153	97.9	10 -145	
	13C-PCB-155	43.0	10 -145	
	13C-PCB-156	94.6	10 -145	
	13C-PCB-157	89.0	10 -145	
	13C-PCB-159	99.3	10 -145	
	13C-PCB-167	98.1	10 -145	
	13C-PCB-169	93.9	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	69.5	10 -145	
13C-PCB-180	70.4	10 -145	
13C-PCB-188	77.8	10 -145	
13C-PCB-189	70.6	10 -145	
13C-PCB-194	93.5	10 -145	
13C-PCB-202	52.8	10 -145	
13C-PCB-206	80.7	10 -145	
13C-PCB-208	81.0	10 -145	
13C-PCB-209	69.8	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 14:50

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-07 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 17:56 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	4.06			J
PCB-2	1.58			J
PCB-3	1.44			J
PCB-4/10	29.7			
PCB-5/8	111			
PCB-6	27.9			
PCB-7/9	9.46			J
PCB-11	317			
PCB-12/13	ND	6.87		
PCB-14	ND	7.79		
PCB-15	30.8			
PCB-16/32	282			
PCB-17	165			
PCB-18	370			
PCB-19	48.7			
PCB-20/21/33	257			
PCB-22	135			
PCB-23	ND	2.21		
PCB-24/27	43.7			
PCB-25	57.7			
PCB-26	87.6			
PCB-28	611			
PCB-29	ND		3.00	
PCB-30	ND	0.818		
PCB-31	321			
PCB-34	4.98			J
PCB-35	18.3			
PCB-36	11.0			
PCB-37	70.5			
PCB-38	6.61			J
PCB-39	ND	2.12		
PCB-40	157			
PCB-41/64/71/72	692			
PCB-42/59	298			
PCB-43/49	882			
PCB-44	867			
PCB-45	116			
PCB-46	64.3			
PCB-47	362			B
PCB-48/75	163			
PCB-50	ND		5.13	
PCB-51	68.5			
PCB-52/69	1190			
PCB-53	212			
PCB-54	ND		11.1	
PCB-55	12.0			
PCB-56/60	371			
PCB-57	6.21			J
PCB-58	4.21			J
PCB-61/70	745			
PCB-62	ND	2.20		
PCB-63	33.9			
PCB-65	ND	2.27		
PCB-66/76	730			
PCB-67	28.8			
PCB-68	10.6			
PCB-73	3.88			J
PCB-74	315			
PCB-77	52.2			
PCB-78	ND	1.96		
PCB-79	15.1			
PCB-80	ND	1.59		
PCB-81	1.98			J
PCB-82	143			
PCB-83	1.50			J
PCB-84/92	593			
PCB-85/116	210			
PCB-86	3.78			J
PCB-87/117/125	398			
PCB-88/91	229			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 14:50

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-07 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 17:56 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	ND		16.8	
PCB-90/101	1540			
PCB-93	ND	3.20		
PCB-94	12.3			
PCB-95/98/102	1290			
PCB-96	ND		17.1	
PCB-97	407			
PCB-99	688			
PCB-100	ND		13.5	
PCB-103	30.8			
PCB-104	1.60			J
PCB-105	203			
PCB-106/118	828			
PCB-107/109	83.1			
PCB-108/112	69.2			
PCB-110	1270			
PCB-111/115	14.6			J
PCB-113	3.62			J
PCB-114	9.23			J
PCB-119	40.6			
PCB-120	5.90			J
PCB-121	ND	1.93		
PCB-122	6.91			J
PCB-123	16.2			
PCB-124	39.4			
PCB-126	6.46			J
PCB-127	ND	3.55		
PCB-128/162	109			
PCB-129	30.1			
PCB-130	63.4			
PCB-131	ND	4.26		
PCB-132/161	279			
PCB-133/142	29.5			
PCB-134/143	54.3			
PCB-135	192			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	195			
PCB-137	22.3			
PCB-138/163/164	1000			
PCB-139/149	1120			
PCB-140	8.31			J
PCB-141	179			
PCB-144	63.0			
PCB-145	2.38			J
PCB-146/165	168			
PCB-147	ND		23.2	
PCB-148	ND	4.18		
PCB-150	5.84			J
PCB-151	361			
PCB-152	ND	2.92		
PCB-153	1030			
PCB-154	27.0			
PCB-155	ND	2.85		
PCB-156	58.0			
PCB-157	14.0			
PCB-158/160	89.9			
PCB-159	ND	2.75		
PCB-166	ND	2.94		
PCB-167	29.9			
PCB-168	ND	2.65		
PCB-169	ND	3.58		
PCB-170	146			
PCB-171	56.4			
PCB-172	31.3			
PCB-173	7.70			J
PCB-174	242			
PCB-175	10.5			
PCB-176	31.3			
PCB-177	140			
PCB-178	51.0			
PCB-179	124			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 14:50

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-07 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 17:56 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	373			
PCB-181	ND	3.03		
PCB-182/187	281			
PCB-183	113			
PCB-184	ND	1.91		
PCB-185	25.9			
PCB-186	ND	1.75		
PCB-188	ND	1.42		
PCB-189	3.74			J
PCB-190	32.2			
PCB-191	5.45			J
PCB-192	ND	2.35		
PCB-193	19.3			
PCB-194	35.6			
PCB-195	17.2			
PCB-196/203	57.5			
PCB-197	3.33			J
PCB-198	2.87			J
PCB-199	72.1			
PCB-200	6.03			J
PCB-201	10.6			
PCB-202	22.3			
PCB-204	ND	2.09		
PCB-205	2.76			J
PCB-206	16.6			
PCB-207	ND		2.72	
PCB-208	8.31			J
PCB-209	11.2			
Total monoCB	7.08			
Total diCB	525			
Total triCB	2490			
Total tetraCB	7400		7420	B
Total pentaCB	8140		8190	
Total hexaCB	5140		5160	
Total heptaCB	1690			
Total octaCB	230			
Total nonaCB	24.9		27.6	
DecaCB	11.2			
Total PCB	25700			B
13C-PCB-8	15.3			
13C-PCB-31	182			
13C-PCB-79	715			
13C-PCB-133	790			
13C-PCB-178	673			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 14:50

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-07 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 17:56 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	95.1	5 -145	
	13C-PCB-3	94.6	5 -145	
	13C-PCB-4	72.4	5 -145	
	13C-PCB-11	84.9	5 -145	
	13C-PCB-9	78.0	5 -145	
	13C-PCB-19	85.4	5 -145	
	13C-PCB-28	94.8	5 -145	
	13C-PCB-32	90.8	5 -145	
	13C-PCB-37	111	5 -145	
	13C-PCB-47	87.2	5 -145	
	13C-PCB-52	90.6	5 -145	
	13C-PCB-54	69.8	5 -145	
	13C-PCB-70	94.1	5 -145	
	13C-PCB-77	95.2	10 -145	
	13C-PCB-80	93.9	10 -145	
	13C-PCB-81	92.1	10 -145	
	13C-PCB-95	87.3	10 -145	
	13C-PCB-97	88.7	10 -145	
	13C-PCB-101	88.4	10 -145	
	13C-PCB-104	81.4	10 -145	
	13C-PCB-105	108	10 -145	
	13C-PCB-114	100	10 -145	
	13C-PCB-118	95.0	10 -145	
	13C-PCB-123	90.6	10 -145	
	13C-PCB-126	111	10 -145	
	13C-PCB-127	103	10 -145	
	13C-PCB-138	99.3	10 -145	
	13C-PCB-141	102	10 -145	
	13C-PCB-153	98.7	10 -145	
	13C-PCB-155	61.0	10 -145	
	13C-PCB-156	90.8	10 -145	
	13C-PCB-157	89.4	10 -145	
	13C-PCB-159	100	10 -145	
	13C-PCB-167	97.2	10 -145	
	13C-PCB-169	88.7	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	76.2	10 -145	
13C-PCB-180	70.9	10 -145	
13C-PCB-188	81.1	10 -145	
13C-PCB-189	69.4	10 -145	
13C-PCB-194	93.7	10 -145	
13C-PCB-202	60.3	10 -145	
13C-PCB-206	86.1	10 -145	
13C-PCB-208	87.8	10 -145	
13C-PCB-209	77.5	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-1001-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-08 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 19:00 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	3.78			J
PCB-2	ND	2.51		
PCB-3	ND	2.50		
PCB-4/10	33.2			
PCB-5/8	131			
PCB-6	31.5			
PCB-7/9	ND	7.96		
PCB-11	338			
PCB-12/13	6.71			J
PCB-14	ND	7.61		
PCB-15	33.1			
PCB-16/32	304			
PCB-17	180			
PCB-18	391			
PCB-19	51.5			
PCB-20/21/33	279			
PCB-22	154			
PCB-23	ND	2.29		
PCB-24/27	50.0			
PCB-25	65.3			
PCB-26	94.0			
PCB-28	677			
PCB-29	4.04			J
PCB-30	ND	1.69		
PCB-31	349			
PCB-34	4.76			J
PCB-35	19.0			
PCB-36	ND		8.44	
PCB-37	68.6			
PCB-38	6.40			J
PCB-39	ND	1.54		
PCB-40	165			
PCB-41/64/71/72	739			
PCB-42/59	307			
PCB-43/49	923			
PCB-44	889			
PCB-45	134			
PCB-46	73.4			
PCB-47	369			B
PCB-48/75	176			
PCB-50	4.82			J
PCB-51	79.3			
PCB-52/69	1260			
PCB-53	228			
PCB-54	12.4			
PCB-55	11.2			
PCB-56/60	388			
PCB-57	5.82			J
PCB-58	4.66			J
PCB-61/70	791			
PCB-62	ND	2.36		
PCB-63	33.4			
PCB-65	ND	2.43		
PCB-66/76	812			
PCB-67	30.6			
PCB-68	10.8			
PCB-73	4.26			J
PCB-74	332			
PCB-77	56.0			
PCB-78	ND	2.11		
PCB-79	17.5			
PCB-80	ND	1.66		
PCB-81	2.47			J
PCB-82	143			
PCB-83	ND	1.69		
PCB-84/92	614			
PCB-85/116	189			
PCB-86	ND		4.46	
PCB-87/117/125	407			
PCB-88/91	237			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-1001-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-08 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 19:00 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	21.2			
PCB-90/101	1600			
PCB-93	ND	2.48		
PCB-94	12.7			
PCB-95/98/102	1330			
PCB-96	21.4			
PCB-97	408			
PCB-99	706			
PCB-100	16.1			
PCB-103	32.6			
PCB-104	2.23			J
PCB-105	220			
PCB-106/118	882			
PCB-107/109	88.5			
PCB-108/112	62.1			
PCB-110	1230			
PCB-111/115	16.9			J
PCB-113	3.48			J
PCB-114	8.11			J
PCB-119	45.0			
PCB-120	7.56			J
PCB-121	ND	1.50		
PCB-122	7.20			J
PCB-123	14.3			
PCB-124	39.1			
PCB-126	ND		4.28	
PCB-127	ND	3.81		
PCB-128/162	116			
PCB-129	29.3			
PCB-130	61.9			
PCB-131	ND	3.40		
PCB-132/161	270			
PCB-133/142	28.4			
PCB-134/143	53.8			
PCB-135	212			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	215			
PCB-137	25.1			
PCB-138/163/164	1070			
PCB-139/149	1250			
PCB-140	11.3			
PCB-141	179			
PCB-144	68.5			
PCB-145	ND	2.96		
PCB-146/165	166			
PCB-147	31.6			
PCB-148	ND	3.96		
PCB-150	8.88			J
PCB-151	397			
PCB-152	ND	2.77		
PCB-153	1130			
PCB-154	28.6			
PCB-155	ND	2.70		
PCB-156	61.7			
PCB-157	15.0			
PCB-158/160	95.2			
PCB-159	ND	2.35		
PCB-166	ND	2.52		
PCB-167	31.0			
PCB-168	ND	2.12		
PCB-169	ND	3.19		
PCB-170	172			
PCB-171	56.8			
PCB-172	31.6			
PCB-173	ND	3.78		
PCB-174	232			
PCB-175	10.7			
PCB-176	ND		33.6	
PCB-177	133			
PCB-178	50.2			
PCB-179	135			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-1001-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-08 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 19:00 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	417			
PCB-181	ND	3.09		
PCB-182/187	331			
PCB-183	131			
PCB-184	ND	2.22		
PCB-185	20.1			
PCB-186	ND	2.04		
PCB-188	ND	1.95		
PCB-189	5.44			J
PCB-190	36.8			
PCB-191	7.43			J
PCB-192	ND	2.40		
PCB-193	21.4			
PCB-194	43.3			
PCB-195	17.7			
PCB-196/203	75.7			
PCB-197	4.04			J
PCB-198	ND	3.26		
PCB-199	77.8			
PCB-200	8.04			J
PCB-201	10.7			
PCB-202	24.9			
PCB-204	ND	2.29		
PCB-205	ND	2.48		
PCB-206	24.5			
PCB-207	3.22			J
PCB-208	12.2			
PCB-209	13.1			
Total monoCB	3.78			
Total diCB	573			
Total triCB	2700		2710	
Total tetraCB	7860			
Total pentaCB	8360		8370	
Total hexaCB	5540			
Total heptaCB	1790		1830	
Total octaCB	262			
Total nonaCB	40.0			
DecaCB	13.1			
Total PCB	27100			B
13C-PCB-8	21.8			
13C-PCB-31	184			
13C-PCB-79	638			
13C-PCB-133	593			
13C-PCB-178	521			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-1001-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-08 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 19:00 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	77.1	5 -145	
	13C-PCB-3	81.7	5 -145	
	13C-PCB-4	59.2	5 -145	
	13C-PCB-11	81.6	5 -145	
	13C-PCB-9	68.2	5 -145	
	13C-PCB-19	75.9	5 -145	
	13C-PCB-28	91.8	5 -145	
	13C-PCB-32	84.6	5 -145	
	13C-PCB-37	107	5 -145	
	13C-PCB-47	81.5	5 -145	
	13C-PCB-52	84.7	5 -145	
	13C-PCB-54	67.7	5 -145	
	13C-PCB-70	84.9	5 -145	
	13C-PCB-77	88.5	10 -145	
	13C-PCB-80	89.7	10 -145	
	13C-PCB-81	87.2	10 -145	
	13C-PCB-95	83.6	10 -145	
	13C-PCB-97	85.9	10 -145	
	13C-PCB-101	80.7	10 -145	
	13C-PCB-104	73.4	10 -145	
	13C-PCB-105	106	10 -145	
	13C-PCB-114	96.2	10 -145	
	13C-PCB-118	86.2	10 -145	
	13C-PCB-123	84.1	10 -145	
	13C-PCB-126	110	10 -145	
	13C-PCB-127	109	10 -145	
	13C-PCB-138	96.3	10 -145	
	13C-PCB-141	101	10 -145	
	13C-PCB-153	101	10 -145	
	13C-PCB-155	54.5	10 -145	
	13C-PCB-156	88.5	10 -145	
	13C-PCB-157	84.8	10 -145	
	13C-PCB-159	95.6	10 -145	
	13C-PCB-167	91.5	10 -145	
	13C-PCB-169	86.4	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	76.1	10 -145	
13C-PCB-180	78.2	10 -145	
13C-PCB-188	78.5	10 -145	
13C-PCB-189	75.6	10 -145	
13C-PCB-194	89.6	10 -145	
13C-PCB-202	61.4	10 -145	
13C-PCB-206	79.6	10 -145	
13C-PCB-208	75.0	10 -145	
13C-PCB-209	75.4	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-09 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 20:04 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	4.60			J
PCB-2	ND	2.53		
PCB-3	ND	2.52		
PCB-4/10	34.9			
PCB-5/8	139			
PCB-6	36.9			
PCB-7/9	ND	7.29		
PCB-11	334			
PCB-12/13	8.59			J
PCB-14	ND	6.74		
PCB-15	38.1			
PCB-16/32	333			
PCB-17	192			
PCB-18	426			
PCB-19	55.9			
PCB-20/21/33	299			
PCB-22	160			
PCB-23	ND	2.32		
PCB-24/27	52.5			
PCB-25	68.2			
PCB-26	96.9			
PCB-28	741			
PCB-29	ND		3.26	
PCB-30	ND	0.839		
PCB-31	381			
PCB-34	3.73			J
PCB-35	19.4			
PCB-36	11.3			
PCB-37	75.2			
PCB-38	9.39			J
PCB-39	1.26			J
PCB-40	167			
PCB-41/64/71/72	741			
PCB-42/59	317			
PCB-43/49	957			
PCB-44	910			
PCB-45	140			
PCB-46	72.8			
PCB-47	366			B
PCB-48/75	179			
PCB-50	ND		5.14	
PCB-51	75.6			
PCB-52/69	1280			
PCB-53	235			
PCB-54	ND		11.9	
PCB-55	13.3			
PCB-56/60	405			
PCB-57	6.34			J
PCB-58	4.42			J
PCB-61/70	787			
PCB-62	ND	2.90		
PCB-63	34.3			
PCB-65	ND	2.99		
PCB-66/76	773			
PCB-67	27.9			
PCB-68	11.7			
PCB-73	4.05			J
PCB-74	338			
PCB-77	53.4			
PCB-78	ND	2.60		
PCB-79	15.2			
PCB-80	ND	2.20		
PCB-81	2.72			J
PCB-82	154			
PCB-83	ND	2.32		
PCB-84/92	650			
PCB-85/116	203			
PCB-86	ND	3.73		
PCB-87/117/125	416			
PCB-88/91	247			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-09 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 20:04 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	19.0			
PCB-90/101	1660			
PCB-93	ND	3.57		
PCB-94	13.1			
PCB-95/98/102	1360			
PCB-96	16.7			
PCB-97	422			
PCB-99	745			
PCB-100	13.9			
PCB-103	32.1			
PCB-104	2.08			J
PCB-105	224			
PCB-106/118	920			
PCB-107/109	89.4			
PCB-108/112	65.0			
PCB-110	1310			
PCB-111/115	18.2			J
PCB-113	3.55			J
PCB-114	10.7			
PCB-119	43.9			
PCB-120	7.93			J
PCB-121	ND	2.15		
PCB-122	7.97			J
PCB-123	16.9			
PCB-124	41.7			
PCB-126	6.70			J
PCB-127	ND	3.75		
PCB-128/162	128			
PCB-129	30.8			
PCB-130	72.0			
PCB-131	ND	4.79		
PCB-132/161	309			
PCB-133/142	29.8			
PCB-134/143	65.6			
PCB-135	212			
PCB-136	211			
PCB-137	24.5			
PCB-138/163/164	1030			
PCB-139/149	1300			
PCB-140	7.81			J
PCB-141	186			
PCB-144	72.1			
PCB-145	ND	2.56		
PCB-146/165	189			
PCB-147	33.4			
PCB-148	ND	3.43		
PCB-150	4.90			J
PCB-151	388			
PCB-152	ND	2.40		
PCB-153	1140			
PCB-154	28.5			
PCB-155	ND	2.34		
PCB-156	66.0			
PCB-157	12.3			
PCB-158/160	94.1			
PCB-159	ND	2.93		
PCB-166	ND	3.13		
PCB-167	32.6			
PCB-168	ND	2.99		
PCB-169	ND	3.58		
PCB-170	177			
PCB-171	59.7			
PCB-172	32.7			
PCB-173	4.20			J
PCB-174	254			
PCB-175	10.8			
PCB-176	37.1			
PCB-177	160			
PCB-178	61.9			
PCB-179	141			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-09 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 20:04 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	436			
PCB-181	ND	3.60		
PCB-182/187	343			
PCB-183	134			
PCB-184	ND	2.59		
PCB-185	25.2			
PCB-186	ND	2.38		
PCB-188	1.73			J
PCB-189	ND		3.69	
PCB-190	40.4			
PCB-191	7.02			J
PCB-192	ND	2.79		
PCB-193	ND		20.8	
PCB-194	44.1			
PCB-195	18.6			
PCB-196/203	74.6			
PCB-197	ND	2.13		
PCB-198	ND		2.93	
PCB-199	92.3			
PCB-200	8.25			J
PCB-201	14.7			
PCB-202	29.4			
PCB-204	ND	2.31		
PCB-205	ND	2.57		
PCB-206	25.3			
PCB-207	ND		3.26	
PCB-208	11.8			
PCB-209	12.0			
Total monoCB	4.60			
Total diCB	592			
Total triCB	2930			
Total tetraCB	7920		7940	B
Total pentaCB	8730			
Total hexaCB	5670			
Total heptaCB	1930		1950	
Total octaCB	282		285	
Total nonaCB	37.1		40.3	
DecaCB	12.0			
Total PCB	28100			B
13C-PCB-8	4.76			
13C-PCB-31	120			
13C-PCB-79	659			
13C-PCB-133	860			
13C-PCB-178	755			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IB-RW-01-S-B-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 15:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-09 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 20:04 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	81.6	5 -145	
	13C-PCB-3	83.6	5 -145	
	13C-PCB-4	62.1	5 -145	
	13C-PCB-11	86.8	5 -145	
	13C-PCB-9	72.9	5 -145	
	13C-PCB-19	82.8	5 -145	
	13C-PCB-28	95.7	5 -145	
	13C-PCB-32	90.9	5 -145	
	13C-PCB-37	111	5 -145	
	13C-PCB-47	88.2	5 -145	
	13C-PCB-52	88.7	5 -145	
	13C-PCB-54	73.4	5 -145	
	13C-PCB-70	92.8	5 -145	
	13C-PCB-77	91.0	10 -145	
	13C-PCB-80	91.5	10 -145	
	13C-PCB-81	90.8	10 -145	
	13C-PCB-95	87.4	10 -145	
	13C-PCB-97	89.7	10 -145	
	13C-PCB-101	85.1	10 -145	
	13C-PCB-104	83.0	10 -145	
	13C-PCB-105	101	10 -145	
	13C-PCB-114	96.2	10 -145	
	13C-PCB-118	89.7	10 -145	
	13C-PCB-123	88.4	10 -145	
	13C-PCB-126	98.2	10 -145	
	13C-PCB-127	99.2	10 -145	
	13C-PCB-138	94.5	10 -145	
	13C-PCB-141	93.1	10 -145	
	13C-PCB-153	88.7	10 -145	
	13C-PCB-155	59.0	10 -145	
	13C-PCB-156	95.2	10 -145	
	13C-PCB-157	92.4	10 -145	
	13C-PCB-159	95.8	10 -145	
	13C-PCB-167	96.3	10 -145	
	13C-PCB-169	90.2	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	78.1	10 -145	
13C-PCB-180	77.1	10 -145	
13C-PCB-188	80.5	10 -145	
13C-PCB-189	78.3	10 -145	
13C-PCB-194	91.4	10 -145	
13C-PCB-202	62.6	10 -145	
13C-PCB-206	95.5	10 -145	
13C-PCB-208	84.4	10 -145	
13C-PCB-209	89.9	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IA-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 16:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-10 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 21:09 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	3.23			J
PCB-2	ND		1.38	
PCB-3	2.09			J
PCB-4/10	33.0			
PCB-5/8	138			
PCB-6	31.6			
PCB-7/9	11.8			J
PCB-11	300			
PCB-12/13	ND	8.57		
PCB-14	ND	7.38		
PCB-15	38.6			
PCB-16/32	314			
PCB-17	175			
PCB-18	421			
PCB-19	51.8			
PCB-20/21/33	286			
PCB-22	165			
PCB-23	ND	2.05		
PCB-24/27	47.1			
PCB-25	77.2			
PCB-26	108			
PCB-28	693			
PCB-29	ND		4.16	
PCB-30	ND	0.822		
PCB-31	406			
PCB-34	3.96			J
PCB-35	17.1			
PCB-36	7.99			J
PCB-37	68.9			
PCB-38	9.27			J
PCB-39	1.29			J
PCB-40	185			
PCB-41/64/71/72	900			
PCB-42/59	367			
PCB-43/49	1160			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	1100			
PCB-45	152			
PCB-46	91.0			
PCB-47	462			B
PCB-48/75	195			
PCB-50	6.38			J
PCB-51	180			
PCB-52/69	1690			
PCB-53	323			
PCB-54	31.6			
PCB-55	18.8			
PCB-56/60	477			
PCB-57	7.83			J
PCB-58	4.21			J
PCB-61/70	962			
PCB-62	ND	2.54		
PCB-63	36.3			
PCB-65	ND	2.62		
PCB-66/76	890			
PCB-67	36.1			
PCB-68	11.7			
PCB-73	7.94			J
PCB-74	404			
PCB-77	63.6			
PCB-78	ND	2.26		
PCB-79	22.8			
PCB-80	ND	1.95		
PCB-81	3.69			J
PCB-82	202			
PCB-83	ND	1.62		
PCB-84/92	900			
PCB-85/116	267			
PCB-86	8.55			J
PCB-87/117/125	578			
PCB-88/91	350			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IA-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 16:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-10 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 21:09 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	21.8			
PCB-90/101	2120			
PCB-93	ND	2.65		
PCB-94	21.5			
PCB-95/98/102	1850			
PCB-96	29.2			
PCB-97	573			
PCB-99	959			
PCB-100	38.2			
PCB-103	57.7			
PCB-104	6.20			J
PCB-105	308			
PCB-106/118	1160			
PCB-107/109	110			
PCB-108/112	86.3			
PCB-110	1830			
PCB-111/115	19.9			J
PCB-113	ND	1.80		
PCB-114	16.2			
PCB-119	55.5			
PCB-120	7.80			J
PCB-121	ND	1.60		
PCB-122	11.2			
PCB-123	21.1			
PCB-124	54.3			
PCB-126	5.19			J
PCB-127	ND	3.07		
PCB-128/162	143			
PCB-129	43.2			
PCB-130	75.2			
PCB-131	ND	2.70		
PCB-132/161	302			
PCB-133/142	36.1			
PCB-134/143	74.4			
PCB-135	234			

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	254			
PCB-137	44.4			
PCB-138/163/164	1080			
PCB-139/149	1410			
PCB-140	8.50			J
PCB-141	188			
PCB-144	87.1			
PCB-145	ND	2.79		
PCB-146/165	184			
PCB-147	64.3			
PCB-148	3.46			J
PCB-150	8.43			J
PCB-151	422			
PCB-152	5.25			J
PCB-153	1130			
PCB-154	50.1			
PCB-155	2.10			J
PCB-156	67.4			
PCB-157	15.4			
PCB-158/160	111			
PCB-159	ND	1.74		
PCB-166	ND		2.66	
PCB-167	32.7			
PCB-168	ND	1.68		
PCB-169	ND	2.27		
PCB-170	108			
PCB-171	38.9			
PCB-172	18.6			
PCB-173	ND		3.60	
PCB-174	199			
PCB-175	7.92			J
PCB-176	27.1			
PCB-177	111			
PCB-178	47.7			
PCB-179	130			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IA-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 16:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-10 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 21:09 Column: ZB-1 Analyst: MAS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	283			
PCB-181	ND	3.04		
PCB-182/187	289			
PCB-183	101			
PCB-184	ND	2.14		
PCB-185	22.4			
PCB-186	ND	1.97		
PCB-188	ND		2.47	
PCB-189	ND		4.06	
PCB-190	23.6			
PCB-191	ND		4.32	
PCB-192	ND	2.36		
PCB-193	16.5			
PCB-194	30.1			
PCB-195	12.8			
PCB-196/203	54.0			
PCB-197	ND	2.49		
PCB-198	ND	3.85		
PCB-199	57.6			
PCB-200	ND		7.85	
PCB-201	10.1			
PCB-202	19.3			
PCB-204	ND	2.70		
PCB-205	1.99			J
PCB-206	12.4			
PCB-207	ND	1.76		
PCB-208	4.96			J
PCB-209	5.29			J
Total monoCB	5.32		6.70	
Total diCB	553			
Total triCB	2850		2860	
Total tetraCB	9780			B
Total pentaCB	11700			
Total hexaCB	6080			
Total heptaCB	1420		1440	

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	186		194	
Total nonaCB	17.3			
DecaCB	5.29			
Total PCB	32600			B
13C-PCB-8	6.89			
13C-PCB-31	146			
13C-PCB-79	569			
13C-PCB-133	697			
13C-PCB-178	656			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: IA-RW-01-S-M-20150615

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Study
Date Collected: 15-Jun-2015 16:15

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500539-10 Date Received: 16-Jun-2015 9:35
QC Batch: B5F0093 Date Extracted: 23-Jun-2015 7:48
Date Analyzed : 25-Jun-15 21:09 Column: ZB-1 Analyst: MAS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	66.1	5 -145	
	13C-PCB-3	64.0	5 -145	
	13C-PCB-4	52.4	5 -145	
	13C-PCB-11	67.4	5 -145	
	13C-PCB-9	58.1	5 -145	
	13C-PCB-19	63.7	5 -145	
	13C-PCB-28	74.4	5 -145	
	13C-PCB-32	72.9	5 -145	
	13C-PCB-37	85.7	5 -145	
	13C-PCB-47	68.4	5 -145	
	13C-PCB-52	69.4	5 -145	
	13C-PCB-54	55.6	5 -145	
	13C-PCB-70	71.7	5 -145	
	13C-PCB-77	74.0	10 -145	
	13C-PCB-80	72.6	10 -145	
	13C-PCB-81	73.1	10 -145	
	13C-PCB-95	64.8	10 -145	
	13C-PCB-97	72.1	10 -145	
	13C-PCB-101	67.4	10 -145	
	13C-PCB-104	64.8	10 -145	
	13C-PCB-105	78.8	10 -145	
	13C-PCB-114	74.9	10 -145	
	13C-PCB-118	71.2	10 -145	
	13C-PCB-123	71.8	10 -145	
	13C-PCB-126	85.5	10 -145	
	13C-PCB-127	81.2	10 -145	
	13C-PCB-138	76.2	10 -145	
	13C-PCB-141	76.7	10 -145	
	13C-PCB-153	74.8	10 -145	
	13C-PCB-155	46.7	10 -145	
	13C-PCB-156	71.9	10 -145	
	13C-PCB-157	68.8	10 -145	
	13C-PCB-159	76.9	10 -145	
	13C-PCB-167	73.9	10 -145	
	13C-PCB-169	67.7	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	62.2	10 -145	
13C-PCB-180	62.7	10 -145	
13C-PCB-188	63.1	10 -145	
13C-PCB-189	60.0	10 -145	
13C-PCB-194	70.9	10 -145	
13C-PCB-202	49.6	10 -145	
13C-PCB-206	68.1	10 -145	
13C-PCB-208	64.4	10 -145	
13C-PCB-209	61.9	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Vial Masses

Vial Number	Lab ID	Initial Mass (g)	Final Mass (g)	Hexane Volume (mL)
59	1500539-01	37.2526	41.9555	60
53	1500539-02	37.0306	41.8172	63
49	1500539-03	37.0866	41.8384	62
51	1500539-04	37.0575	41.6706	62
57	1500539-05	37.2841	42.0203	63
55	1500539-06	36.7350	41.4915	62
63	1500539-07	37.1416	41.8790	62
65	1500539-08	37.2200	42.0078	62
67	1500539-09	37.2621	42.1088	62
61	1500539-10	36.9871	41.7242	60

Please note that the final masses include additional vial labels.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

ENVIRON CHAIN-of-CUSTODY № 11485

☐ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)
☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)
☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

MSA#: _____ WO#: _____

PROJECT NAME / FACILITY ID: POLA/POLB LDL Study

FIELD PERSON: J. Ahlaster

PROJECT NUMBER: 04 33310A11 DATE: June 15, 2015

PROJECT MANAGER: D. Moore

PROJECT LOCATION: San Pedro / Long Beach

LABORATORY: Vista

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #: _____

SAMPLER:

SIGNATURE:

1500539
0.7°C

SAMPLE I.D. NUMBER	YEAR / SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED 1668B PCB + PAC	1699 PDTs + PAC	COMMENTS
CP-RW-01-S-M-20150615	6/15	0810	—	~~W~~	W	1	—	—	X		~~Via~~ Vial 59
CP-RW-01-S-M-20150615		810								X	" 60
REF-RW-01-S-M-20150615		0955							X		" 53
REF-RW-01-S-M-20150615		0955								X	" 54
OB-RW-01-S-M-20150615		1120							X		" 49
OB-RW-01-S-M-20150615		1120								X	" 50
OB-RW-01-S-B-20150615		1140							X		" 51
OB-RW-01-S-B-20150615		1140								X	" 52
SP-RW-01-S-M-20150615		1230							X		" 57
SP-RW-01-S-M-20150615		1230								X	" 58
LARE-RW-01-S-M-20150615		1320							X		" 55
LARE-RW-01-S-M-20150615		1320								X	" 56
IB-RW-01-S-M-20150615	↓	1450	↓	↓	↓	↓	↓	↓	X		" 63
TOTAL	X	X	X								

RELINQUISHED BY: _____ TIME/DATE: 1730 15/6/15

RECEIVED BY: _____ TIME/DATE: 6/16/15 0935

(COMPANY): Vista Analytical

RELINQUISHED BY: _____ TIME/DATE: _____

RECEIVED BY: _____ TIME/DATE: _____

(COMPANY): _____

RELINQUISHED BY: _____ TIME/DATE: _____

RECEIVED BY: _____ TIME/DATE: _____

(COMPANY): _____

TURNAROUND TIME (CIRCLE ONE): SAME DAY / 24 HOURS / 48 HOURS / 72 HOURS / 5 DAYS / (NORMAL)

SAMPLE INTEGRITY — INTACT: Y N Temp _____

IF SEALED, SEAL INTEGRITY — INTACT: Y N

O = OTHER; NO = NONE; U = UNKNOWN; S = H_2SO_4; N = HNO_3; H = HCL;

FILE: LOG FORMS\Chain of Custody

ENVIRON

CHAIN-of-CUSTODY № 11487

☒ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)
☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)
☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

MSA#: _____ WO#: _____

PROJECT NAME / FACILITY ID: PGLA/PGLB LDL

FIELD PERSON: J. Arblaster

PROJECT NUMBER: 6433310A11 DATE: June 15/2015

PROJECT MANAGER: D Moore

PROJECT LOCATION: _____

LABORATORY: Vista

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #: _____

SAMPLER: [signature]

SIGNATURE: [signature]

1500539
0.4°C

SAMPLE I.D. NUMBER	SAMPLE DATE (YEAR)	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED: 1668B PCB + PRCs	1699 DDTs + PRCs	COMMENTS
1B-RW-01-S-M-20150615	6/15	1450	–	–	W	1	–	–		X	Vial 64
1B-RW-1001-S-M-20150615		1515							X		" 65
1B-RW-1001-S-M-20150615		1515								X	" 66
1B-RW-01-S-B-20150615		1545							X		" 67
1B-RW-01-S-B-20150615		1545								X	" 68
1A-RW-01-S-M-20150615		1615							X		" 61
1A-RW-01-S-M-20150615		1615	↓	↓	↓	↓	↓	↓		X	" 62
TOTAL	X	X	X								

RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
[signature]	1730 15/6/15 ~~15/6/15~~	[signature] (COMPANY): Vista analytical	6/16/15 0935
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY: (COMPANY):	TIME/DATE:
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY: (COMPANY):	TIME/DATE:

TURNAROUND TIME (CIRCLE ONE): SAME DAY / 24 HOURS / 48 HOURS / 72 HOURS / 5 DAYS / NORMAL

SAMPLE INTEGRITY — INTACT: Y N Temp_____

IF SEALED, SEAL INTEGRITY — INTACT: Y N

O = OTHER; NO = NONE; U = UNKNOWN; S = H_2SO_4; N = HNO_3; H = HCL;

FILE: LOG FORMS\Chain of Custody

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1500539 **TAT** standard

Samples Arrival:	**Date/Time** 6/16/15 0935		**Initials:** DM		**Location:** WR2 **Shelf/Rack:** NA	
Logged In:	**Date/Time** 6/16/15 1229		**Initials:** DM		**Location:** R-1 **Shelf/Rack:** NA	
Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	
Temp °C: 0.3 (uncorrected) **Temp °C:** 0.4 (corrected)		**Time:** 0950		**Thermometer ID:** IR-1		

	YES	NO	NA
Adequate Sample Volume Received?	Y		
Holding Time Acceptable?	Y		
Shipping Container(s) Intact?	Y		
Shipping Custody Seals Intact?	Y		
Shipping Documentation Present?	Y		
Airbill Trk # 7808 2461 4362	Y		
Sample Container Intact?	Y		
Sample Custody Seals Intact?			Y
Chain of Custody / Sample Documentation Present?	Y		
COC Anomaly/Sample Acceptance Form completed?			Y
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			Y

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	(None)	
Shipping Container	Vista	(Client)	Retain	Return	Dispose

Comments:

Sample Login 11/2013 ckt

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Supplemental Report 1

Subcontracted analyses have been added to the original report.

WORK ORDER NUMBER: 15-05-0264

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weston Solutions

Client Project Name: POLB/POLA Low Detection Limit Water Column Study Ph.2

Attention: Sheila Holt
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Approved for release on 06/17/2015 by:
Danielle Gonsman
Project Manager

ResultLink

Email your PM

nelac

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Contents

Client Project Name: POLB/POLA Low Detection Limit Water Column Study Ph.2
Work Order Number: 15-05-0264

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Work Order Narrative

Work Order: 15-05-0264 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/05/15. They were assigned to Work Order 15-05-0264.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client: Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Work Order: 15-05-0264
Project Name: POLB/POLA Low Detection Limit Water Column Study Ph.2
PO Number:
Date/Time Received: 05/05/15 18:00
Number of Containers: 53

Attn: Sheila Holt

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
REF-RW-01-G-M-20150505	15-05-0264-1	05/05/15 08:00	4	Sea Water
SP-RW-01-G-M-20150505	15-05-0264-2	05/05/15 08:30	4	Sea Water
LARE-RW-01-G-M-20150505	15-05-0264-3	05/05/15 09:30	4	Sea Water
OB-RW-01-G-M-20150505	15-05-0264-4	05/05/15 10:40	4	Sea Water
OB-RW-01-G-B-20150505	15-05-0264-5	05/05/15 10:30	4	Sea Water
IB-RW-01-G-M-20150505	15-05-0264-6	05/05/15 11:45	10	Sea Water
IB-RW-1001-G-M-20150505	15-05-0264-7	05/05/15 11:45	4	Sea Water
IB-RW-01-G-B-20150505	15-05-0264-8	05/05/15 11:35	4	Sea Water
CS-RW-01-G-B-20150505	15-05-0264-9	05/05/15 13:15	4	Sea Water
CS-RW-01-G-M-20150505	15-05-0264-10	05/05/15 13:25	4	Sea Water
IA-RW-01-G-M-20150505	15-05-0264-11	05/05/15 14:30	4	Sea Water
EB-20150505	15-05-0264-12	05/05/15 15:20	3	Sea Water

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Analytical Report

Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Date Received: 05/05/15
Work Order: 15-05-0264
Preparation: N/A
Method: SM 2540 D
Units: mg/L

Project: POLB/POLA Low Detection Limit Water Column Study Ph.2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
REF-RW-01-G-M-20150505	**15-05-0264-1-D**	**05/05/15 08:00**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.7	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP-RW-01-G-M-20150505	**15-05-0264-2-D**	**05/05/15 08:30**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.0	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LARE-RW-01-G-M-20150505	**15-05-0264-3-D**	**05/05/15 09:30**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	9.4	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OB-RW-01-G-M-20150505	**15-05-0264-4-D**	**05/05/15 10:40**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
OB-RW-01-G-B-20150505	**15-05-0264-5-D**	**05/05/15 10:30**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	1.1	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-RW-01-G-M-20150505	**15-05-0264-6-I**	**05/05/15 11:45**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-RW-1001-G-M-20150505	**15-05-0264-7-D**	**05/05/15 11:45**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	1.1	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IB-RW-01-G-B-20150505	**15-05-0264-8-D**	**05/05/15 11:35**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.6	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Date Received: 05/05/15
Work Order: 15-05-0264
Preparation: N/A
Method: SM 2540 D
Units: mg/L

Project: POLB/POLA Low Detection Limit Water Column Study Ph.2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-RW-01-G-B-20150505	**15-05-0264-9-D**	**05/05/15 13:15**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	7.3	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CS-RW-01-G-M-20150505	**15-05-0264-10-D**	**05/05/15 13:25**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	2.3	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-RW-01-G-M-20150505	**15-05-0264-11-D**	**05/05/15 14:30**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	3.3	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-09-010-7161**	**N/A**	**Aqueous**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Sample Duplicate

Weston Solutions		Date Received:	05/05/15
5817 Dryden Place, Suite 101		Work Order:	15-05-0264
Carlsbad, CA 92008-9999		Preparation:	N/A
		Method:	SM 2540 D
Project: POLB/POLA Low Detection Limit Water Column Study Ph.2			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
IB-RW-01-G-M-20150505	**Sample**	**Sea Water**	**N/A**	**05/06/15 00:00**	**05/06/15 20:00**	**F0506TSSD2**
IB-RW-01-G-M-20150505	**Sample Duplicate**	**Sea Water**	**N/A**	**05/06/15 00:00**	**05/06/15 20:00**	**F0506TSSD2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total Suspended	ND	ND	N/A	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Weston Solutions	Date Received: 05/05/15
5817 Dryden Place, Suite 101	Work Order: 15-05-0264
Carlsbad, CA 92008-9999	Preparation: N/A
	Method: SM 2540 D
Project: POLB/POLA Low Detection Limit Water Column Study Ph.2	Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-010-7161	**LCS**	**Aqueous**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**
099-09-010-7161	**LCSD**	**Aqueous**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Solids, Total Suspended	100.0	100.0	100	104.0	104	80-120	4	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 15-05-0264 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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WESTON SOLUTIONS

☒ 5817 Dryden Place, Ste 101 • Carlsbad, CA 92008 • (760) 795-6900, FAX 931-1580
☐ 1340 Treat Blvd, Ste 210 • Walnut Creek, CA 94597 • (925) 948-2600, FAX 948-2601

CHAIN OF CUSTODY

37108

DATE 5 MAY 2015 PAGE 1 OF 1

PROJECT NAME / SURVEY / PROJECT NUMBER: POLB / POLA LOW DETECTION LIMIT WATER COLUMN STUDY PHASE 2

PROJECT MANAGER / CONTACT: SHEILA HOLT

CLIENT: WESTON SOLUTIONS

ADDRESS: SEE ABOVE

PHONE / FAX / EMAIL:

FOR WESTON USE ONLY: 15-05-0264

	SITE ID (Location)	SAMPLE ID	DATE	TIME	MATRIX	CONTAINER TYPE / VOLUME	TOTAL NUMBER OF CONTAINER	TOC	DOC	POC	TSS					PRESERVED HOW	SAMPLE TEMP. (°C) UPON RECEIPT	WESTON LAB ID
1		REF-RW-01-G-M-20150505	5May15	0800	SLT	P+G / Various	4	X	X	X	X					ice/H_2SO_4		
2		SP-RW-01-G-M-20150505		0830			↓	↓	↓	↓	↓					↓		
3		LARE-RW-01-G-M-20150505		0930			↓	↓	↓	↓	↓							
4		OB-RW-01-G-M-20150505		1040			↓	↓	↓	↓	↓							
5		OB-RW-01-G-B-20150505		1030			↓	↓	↓	↓	↓							
6		IB-RW-01-G-M-20150505		1145			10*	↓	↓	↓	↓							
7		IB-RW-1001-G-M-20150505		1145			4	↓	↓	↓	↓							
8		IB-RW-01-G-B-20150505		1135			↓	↓	↓	↓	↓							
9		CB-RW-01-G-B-20150505		1315			↓	↓	↓	↓	↓							
10		CB-RW-01-G-M-20150505		1325			↓	↓	↓	↓	↓							
11		IA-RW-01-G-M-20150505		~~1315~~ 1415			↓	↓	↓	↓	↓							
12		EB-20150505		1520			3	X	X	X								

Sample Matrix Codes: FW= fresh water GW=ground water SLT=salt water SW=storm water WW=waste water SED=sediment A=air BIO=biologic SS=soil T=tissue O=other (specify) ____________

Container Code: G=glass P=plastic B=bags ☐ O=other ____________

Shipped By: ☐ Courier ☐ UPS ☐ FedEx ☐ USPS ☐ Client drop off ☐ Other ____________

Turnaround Time: ☐ 2-day ☐ 5-day ☐ 7-day ☐ 10-day ☐ 14-day ☐ Standard ☐ Other ____________

Reporting Requirements: ☐ PDF ☐ EDD ☐ Hard Copy ☐ Email ☐ Other ____________

SAMPLED BY: PRINT: Damon Owen / Nick Cochran / Jennifer Arblaster SIGNATURE: [signature]

COMMENTS / SPECIAL INSTRUCTIONS
*6 extra bottles for QA samples see attached. DOC to be filtered @ Eurofins + shipped to MSI

	RELINQUISHED BY				RECEIVED BY			
	Print Name	Signature	Firm	Date/Time	Print Name	Signature	Firm	Date/Time
1.	Damon Owen	[signature]	Weston	5.5.15/1645	D. Vrautan	[signature]	ECI	5/05/15 @ 16:45
2.	D. Vrautan	[signature]	ECI	5/05/15 @ 18:00	Yan Liao	[signature]	ECI	5/5/15 1800
3.								
4.								
5.								
6.								

Table 6. Laboratory Quality Assurance/Quality Control Analysis Summary
Ports of Los Angeles and Long Beach
San Pedro and Long Beach, California

0264

Analysis Type	Initial Calibration [1,2]	Continuing Calibration Verification	LCS or SRM [3]	Replicates	Matrix Spikes	Matrix Spike Duplicates	Method Blanks	Surrogate Spikes	Internal Standard
Total solids	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
Particle size	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
TSS	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
TOC/DOC	As needed	1 per 10 analytical runs	1 per 20 samples or 1 per batch	NA	1 per 20 samples or 1 per batch	1 per 20 samples or 1 per batch	Each batch	NA	NA
POC	Daily or each batch	1 per 16 samples	1 per 20 samples	1 per 20 samples	NA	NA	Each batch	NA	NA
PCB congeners by high-resolution method	As needed	Every 12 hours	1 per 20 samples	NA	NA4	NA4	1 per 20 samples	NA [4]	Every sample
Organochlorine pesticides by high-resolution method	As needed	Every 12 hours	1 per 20 samples	NA	NA4	NA4	1 per 20 samples	NA [4]	Every sample

Notes:
1.) For physical tests, calibration and certification of drying ovens and weighing scales are conducted annually.
2.) Calibrations should be conducted per analytical methods or instrument manufacturers specifications.
3.) When SRM is not available, a LCS will be analyzed.
4.) Isotope dilution quantitation technique accounts for matrix interferences; thus, matrix spike/matrix spike duplicate are not required.
5.) Values should have relative percent differences less than 40 percent or they are P flagged. ICALS = 20 percent or less and CCALS = 15 percent or less.
6.) Abbreviations:

DOC = dissolved organic carbon
LCS = Laboratory control sample
NA = not applicable
PCB = polychlorinated biphenyl
POC = particulate organic carbon
SRM = standard reference material
TOC = total organic carbon
TSS = total suspended solids

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WORK ORDER NUMBER: 15-05- 0264

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 3

CLIENT: WESTON

DATE: 05 / 05 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 4.3 °C (w/ CF): 4.0 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 804

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 804

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑ 5/6/15	☑	☐
☑ Sampling date ☐ Sampling time ☑ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☑ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☑ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 965

Reviewed by: 805

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WORK ORDER NUMBER: 15-05- 0264

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 3

CLIENT: LESTON

DATE: 05 / 05 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 4.4 °C (w/ CF): 4.1 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 804

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 804

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznna ☑ 3 250AGB ☐ 250CGB ☑ 3 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☑ 2 1AGB ☐ 1AGBna_2 ☐ 1AGBs ☑ 2 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 965

Reviewed by: SR

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WORK ORDER NUMBER: 15-05- 0264

SAMPLE RECEIPT CHECKLIST

COOLER 3 OF 3

CLIENT: WESTON

DATE: 05 / 05 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 4.5 °C (w/ CF): 4.2 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 804

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 804

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☑ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 965

Reviewed by: 802

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WORK ORDER NUMBER: 15-05- 0264

SAMPLE ANOMALY REPORT

DATE: 05 / 05 / 2015

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☑ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☑ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-6) 2x250 unpreserved AGB
2x250 CGBw. H_2SO_4.
1x1L unpreserved PB
1x1L unpreserved AGB
collection time per label is 11:55.

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments: _____

Reported by: QMS

Reviewed by: SM

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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Subcontractor Analysis Report

Work Order: 15-05-0264 Page 1 of 1

One or more samples in this work order have tests that were subcontracted. The subcontract report(s) follows.

For subcontracted tests, please reference the laboratory information noted below.

1. Marine Science Institute - Santa Barbara,CA
   Particulate Organic Carbon, EPA 440 - CHN
   Total and Dissolved Organic Carbon

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ANALYSIS	Sample ID	µmol C/L	Std Dev.
DOC	Filter Blank	21.84	0.60
DOC	REF-RW-01-G-M-20150505	85.77	0.96
DOC	SP-RW-01-G-M-20150505	103.07	1.81
DOC	LARE-RW-01-G-M-20150505	117.77	3.78
DOC	OB-RW-01-G-M-20150505	95.76	0.64
DOC	OB-RW-01-G-B-20150505	89.90	0.70
DOC	IB-RW-1001-G-M-20150505	90.27	1.09
DOC	IB-RW-01-G-B-20150505	95.86	2.05
DOC	IB-RW-01-G-M-20150505	97.37	0.84
DOC	IB-RW-01-G-M-20150505 MSD	562.81	5.17
DOC	IB-RW-01-G-M-20150505 MSD	594.67	7.00
DOC	CS-RW-01-G-B-20150505	88.77	0.63
DOC	CS-RW-01-G-M-20150505	108.35	1.70
DOC	IA-RW-01-G-M-20150505	90.57	1.29
DOC	EB-20150505	14.54	0.68
DOC	CP-RW-01-G-M-20150506	84.18	0.95
DOC	FH-RW-01-G-M-20150506	93.34	2.17
TOC	REF-RW-01-G-M-20150505	111.03	0.91
TOC	SP-RW-01-G-M-20150505	126.03	2.31
TOC	LARE-RW-01-G-M-20150505	201.50	3.71
TOC	OB-RW-01-G-M-20150505	130.19	2.29
TOC	OB-RW-01-G-B-20150505	123.35	2.01
TOC	IB-RW-1001-G-M-20150505	124.40	1.67
TOC	IB-RW-01-G-M-20150505	132.84	2.55
TOC	IB-RW-01-G-B-20150505	122.19	1.74
TOC	IB-RW-01-G-M-20150505 MSD	595.65	3.30
TOC	IB-RW-01-G-M-20150505 MSD	572.50	1.62
TOC	CS-RW-01-G-B-20150505	134.43	1.75
TOC	CS-RW-01-G-M-20150505	162.51	1.71
TOC	IA-RW-01-G-M-20150505	121.50	1.58
TOC	EB-20150505	36.03	0.53
TOC	CP-RW-01-G-M-20150506	114.43	2.18
TOC	FH-RW-01-G-M-20150506	138.60	0.25

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	Sample Batch: Gonsman		AL4875, AL4876	Run Date:	1-Jun-15
Sample Id	Container ID	Carbon (µg)	Volume Liters	Concentration µg/L	Flags
REF-RW-01-G-M-20150505	15-05-0264 1CC	301	1.05	287	
SP-RW-01-G-M-20150505	15-05-0264 2CC	364	1.06	343	
LARE-RW-01-G-M-20150505	15-05-0264 3CC	352	1.04	339	
OB-RW-01-G-M-20150505	15-05-0264 4CC	485	1.05	462	
OB-RW-01-G-B-20150505	15-05-0264 5CC	400	1.05	381	
IB-RW-01-G-M-20150505	15-05-0264 6GG	330	1.07	308	
IB-RW-01-G-M-20150505 rep	15-05-0264 6HH	337	1.05	321	
IB-RW-1001-G-M-20150505	15-05-0264 7CC	385	1.06	363	
IB-RW-01-G-B-20150505	15-05-0264 8CC	213	1.05	203	
CS-RW-01-G-B-20150505	15-05-0264 9CC	472	1.05	450	
CS-RW-01-G-M-20150505	15-05-0264 10CC	667	0.92	725	
IA-RW-01-G-M-20150505	15-05-0264 11CC	109	1.05	104	
EB-20150505	15-05-0264 12CC	12.9	1.05	12.3	
CP-RW-01-G-M-20150506	15-05-0305 1AA	201	1.05	191	
FH-RW-01-G-M-20150506	15-05-0305 2AA	177	1.05	168	
Filter Blank	MB	12.2	1.00	12.2	

Method: CHN EPA 440

Project Number: 15-05-0264
15-05-0305

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	R-Z	Avg K	DL ug
Carbon	52	20.58	**2.55**

	BC		KC	Standards uV	ug
Blanks and spacers		38	20.58	21368	1459
		19	20.60	20387	1391
		58	20.61	19068	1299
		24	20.53	20884	1429

Stdev =	17	Mean =	20.58
3*stdev =	52		
Average =	35		

	Known Carbon %	Measured Carbon %	% Recovery
Cal std 1	71.09%	71.16%	100.1%
Cal std 2	71.09%	71.21%	100.2%
Control	71.09%	71.32%	100.3%
Check std 1	71.09%	71.01%	99.9%

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7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

TO:
Attn: Paradis Lab
Marine Science Institute
Bldg.520, Rm 4001 FL 4L
University of California
Santa Barbara, CA 93106-6150

CHAIN OF CUSTODY RECORD

DATE: 05/11/15
PAGE: 1 OF 1

LABORATORY CLIENT: Eurofins Calscience, Inc.
ADDRESS: 7440 Lincoln Way
CITY: Garden Grove, CA 92841-1427
TEL: (714) 895-5494
E-MAIL: DanielleGonsman@EurofinsUS.com

CLIENT PROJECT NAME / NUMBER: 15-05-0264
P.O. NO.: 15-05-0264
PROJECT CONTACT: Danielle Gonsman
TEMP BLANK:
SAMPLER(S): (PRINT)
LAB USE ONLY:

TURNAROUND TIME
___SAME DAY ___24 HR ___48HR ___72 HR __5 DAYS x STANDARD

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
Samples preserved with HCl
Run duplicate on sample IB-RW-01-G-M-20150505
Please cc JArblaster@environcorp.com on results

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	EPA 440, Particluate Organic Carbon	Volume Filtered (mL)	Duplicate Volume (mL) (15-05-0264-6-GG)
15-05-0264-1	REF-RW-01-G-M-20150505	05/05/15	0800	FILTER	1	X	1050	
15-05-0264-2	SP-RW-01-G-M-20150505	05/05/15	0830	FILTER	1	X	1060	
15-05-0264-3	LARE-RW-01-G-M-20150505	05/05/15	0930	FILTER	1	X	1040	
15-05-0264-4	OB-RW-01-G-M-20150505	05/05/15	1040	FILTER	1	X	1050	
15-05-0264-5	OB-RW-01-G-B-20150505	05/05/15	1030	FILTER	1	X	1050	
15-05-0264-6	IB-RW-01-G-M-20150505	05/05/15	1145	FILTER	1 x2	X	1070	1050
15-05-0264-7	IB-RW-1001-G-M-20150505	05/05/15	1145	FILTER	1	X	1060	
15-05-0264-8	IB-RW-01-G-B-20150505	05/05/15	1135	FILTER	1	X	1050	
15-05-0264-9	CS-RW-01-G-B-20150505	05/05/15	1315	FILTER	1	X	1050	
15-05-0264-10	CS-RW-01-G-M-20150505	05/05/15	1325	FILTER	1	X	920	
15-05-0264-11	IA-RW-01-G-M-20150505	05/05/15	1430	FILTER	1	X	1050	
15-05-0264-12	EB-20150505	05/05/15	1520	FILTER	1	X	1050	

Relinquished by: (Signature)	(Eurofins Calscience)	Received by / Affiliation: (Signature) GSO FX 527883343	Date: 5/11/15	Time: 1540
Relinquished by: (Signature)		Received by / Affiliation: (Signature) MSI Analytical Lab	Date: 5/12/15	Time: 1500
Relinquished by: (Signature)		Received by / Affiliation: (Signature)	Date:	Time:

eurofins | Calscience

7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

TO:
Attn: Carlson Lab
Marine Science Institute
Bldg.520, Rm 4001 FL 4L
University of California
Santa Barbara, CA 93106-6150

CHAIN OF CUSTODY RECORD

DATE: 05/11/15
PAGE: 1 OF 1

LABORATORY CLIENT: **Eurofins Calscience, Inc.**
ADDRESS: **7440 Lincoln Way**
CITY: **Garden Grove, CA 92841-1427**
TEL: **(714) 895-5494**
E-MAIL: DanielleGonsman@EurofinsUS.com

CLIENT PROJECT NAME / NUMBER: **15-05-0264**
P.O. NO.: **15-05-0264**
PROJECT CONTACT: **Danielle Gonsman**
TEMP BLANK:
SAMPLER(S): (PRINT)
LAB USE ONLY

TURNAROUND TIME
___SAME DAY ___24 HR ___48HR ___72 HR __5 DAYS __x__STANDARD

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS
DOC bottles have been filtered and preserved with HCl
TOC preserved with H2SO4
Run MS/MSD on sample IB-RW-01-G-M-20150505 (spike conc.=5 ppm); report as % recovery
Please cc JArblaster@environcorp.com on results

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	Dissolved Organic Carbon	TOC	MS/MSD
15-05-0264-1	REF-RW-01-G-M-20150505	05/05/15	0800	SW	2	X	X	
15-05-0264-2	SP-RW-01-G-M-20150505	05/05/15	0830	SW	2	X	X	
15-05-0264-3	LARE-RW-01-G-M-20150505	05/05/15	0930	SW	2	X	X	
15-05-0264-4	OB-RW-01-G-M-20150505	05/05/15	1040	SW	2	X	X	
15-05-0264-5	OB-RW-01-G-B-20150505	05/05/15	1030	SW	2	X	X	
15-05-0264-6	IB-RW-01-G-M-20150505	05/05/15	1145	SW	6	X	X	X
15-05-0264-7	IB-RW-1001-G-M-20150505	05/05/15	1145	SW	2	X	X	
15-05-0264-8	IB-RW-01-G-B-20150505	05/05/15	1135	SW	2	X	X	
15-05-0264-9	CS-RW-01-G-B-20150505	05/05/15	1315	SW	2	X	X	
15-05-0264-10	CS-RW-01-G-M-20150505	05/05/15	1325	SW	2	X	X	
15-05-0264-11	IA-RW-01-G-M-20150505	05/05/15	1430	SW	2	X	X	
15-05-0264-12	EB-20150505	05/05/15	1520	SW	2	X	X	

Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:
(Eurofins Calscience)	650# 577883343	5/11/15	1540
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:

COPY

AL#: _____

msi

WORK ORDER
ANALYTICAL LAB
MARINE SCIENCE INSTITUTE, UC SANTA BARBARA

Submitted by: Eurofins Calscience Date: 5/11/15

Principal Investigator: _____ Institution: _____

- Analysis:
  - ___ Nutrients: __ PO_4, __ SiO_4, __ NO_2, __ NO_3+NO_2, __ NH_4
  - ___ CHN: __ Synthetic, __ GFF, __ Natural
  - ___ Isotopes: __ ^{13}C, __ ^{15}N, __ ^{34}S, __ ^{2}H, __ ^{18}O; Enriched? Y/N
  - ___ Metals/AAS: __ Furnace, __ Flame; Elements: _____, _____, _____
  - X Other: TOC, DOC, _____

Acidify Samples? (Remove Inorganic Carbon): **Yes** / **No**

- Number of samples submitted: _____ Sample comments: Samples preserved w/ H_2SO_4
- Sample/container handling after analysis: X Discard / __ Pick-up / __ Ship ** Boxes/Coolers: X Discard / __ Pick-up / __ Ship**

** If return shipping is requested, please provide a FedEx Acct # to charge: _____

- Recharge: MSI Project code: _____

  or UC Acct#: ___ (loc) - _____ (acct) - _____ (fund) - ___ (sub) (_____ (index, if applicable))

  or Non-UC Acct# or PO#: _____

- Person to contact with results or questions:

  Name: Danielle Gonsman

  Phone: 714-895-5494

  E-mail: DanielleGonsman@EurofinsUS.com

- Accounts Payable or Person/Department to which the invoice should be sent:

  Contact: Same as above Phone: _____

  E-mail: _____

  Institution: _____ Department: _____

  Street: _____ City: _____ State: _____ Zip: _____

ANALYTICAL LAB USE ONLY

Storage: O / D / F / R / B Comments: _____ e-copy: _____ (initial)

Shipment Confirmation: _____ (initial) COC copies made and originals mailed: _____ (initial)

COPY

June 09, 2015

Vista Project I.D.: 1500414

Dr. David Moore
Ramboll Environ
18100 Von Karman Ave. Suite 600
Irvine, CA 92612

Dear Dr. Moore,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on May 07, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name 'POLA/POLB LDL Phase 2'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1500414
Case Narrative

Sample Condition on Receipt:

Eight SPME fibers were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The four samples designated for analysis by EPA Method 1699 were assigned to Vista Work Order #1500415.

Analytical Notes:

Upon receipt, each vial was weighed and hexane was added to each vial, covering the SPME. A table containing the initial and final weights is included with the datasheets.

EPA Method 1668C

These samples were extracted and analyzed for 209 PCB congeners by EPA Method 1668C using a ZB-1 GC column.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. Nineteen PCB congeners were detected in the Method Blank at concentrations greater than the sample quantitation limit. The OPR recoveries were within the method acceptance criteria.

Labeled standard recoveries for all QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1500414-01	FB-20150506	Vial 77	06-May-15 09:30	07-May-15 10:12	Amber VOA Vial, 60mL
1500414-02	FB PCR1-20150506	Vial 79	06-May-15 09:45	07-May-15 10:12	Amber VOA Vial, 60mL
1500414-03	FB PCR2-20150506	Vial 80	06-May-15 09:45	07-May-15 10:12	Amber VOA Vial, 60mL
1500414-04	FB PCR3-20150506	Vial 81	06-May-15 09:45	07-May-15 10:12	Amber VOA Vial, 60mL

Vista Project: 1500414

Client Project: POLA/POLB LDL Phase 2

ANALYTICAL RESULTS

Sample ID: Method Blank — EPA Method 1668C

Matrix: SPME
QC Batch: B5E0105
Date Extracted: 29-May-2015 8:34
Lab Sample: B5E0105-BLK1
Date Analyzed: 01-Jun-15 14:10 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	9.37			
PCB-2	ND	5.03		
PCB-3	6.72			
PCB-4/10	ND	12.6		
PCB-5/8	50.1			
PCB-6	ND	9.80		
PCB-7/9	ND	9.69		
PCB-11	20.1			
PCB-12/13	ND	8.76		
PCB-14	ND	7.55		
PCB-15	11.9			
PCB-16/32	39.8			
PCB-17	20.9			
PCB-18	51.0			
PCB-19	ND		7.90	
PCB-20/21/33	34.5			
PCB-22	19.7			
PCB-23	ND	1.96		
PCB-24/27	ND		4.45	
PCB-25	5.47			
PCB-26	7.32			
PCB-28	39.7			
PCB-29	ND	1.96		
PCB-30	ND	1.52		
PCB-31	36.0			
PCB-34	ND	1.83		
PCB-35	ND	1.86		
PCB-36	ND	1.79		
PCB-37	4.71			J
PCB-38	ND	1.88		
PCB-39	ND	1.85		
PCB-40	ND	3.19		
PCB-41/64/71/72	12.7			J
PCB-42/59	ND		5.12	
PCB-43/49	12.3			
PCB-44	15.7			
PCB-45	4.65			J
PCB-46	ND	3.12		
PCB-47	5.90			
PCB-48/75	ND		3.41	
PCB-50	ND	3.20		
PCB-51	ND	2.55		
PCB-52/69	20.0			
PCB-53	3.90			J
PCB-54	ND	2.43		
PCB-55	ND	1.60		
PCB-56/60	4.13			J
PCB-57	ND	1.78		
PCB-58	ND	1.76		
PCB-61/70	8.66			J
PCB-62	ND	2.01		
PCB-63	ND	1.72		
PCB-65	ND	2.07		
PCB-66/76	6.13			J
PCB-67	ND	1.83		
PCB-68	ND	1.70		
PCB-73	ND	2.10		
PCB-74	4.38			J
PCB-77	ND	1.68		
PCB-78	ND	1.82		
PCB-79	ND	1.70		
PCB-80	ND	1.49		
PCB-81	ND	1.66		
PCB-82	ND	8.25		
PCB-83	ND	5.06		
PCB-84/92	ND	6.96		
PCB-85/116	ND	6.04		
PCB-86	ND	8.14		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank — EPA Method 1668C

Matrix: SPME

QC Batch: B5E0105
Date Extracted: 29-May-2015 8:34

Lab Sample: B5E0105-BLK1
Date Analyzed: 01-Jun-15 14:10 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers	Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-87/117/125	ND	5.28			PCB-133/142	ND	2.75		
PCB-88/91	ND	7.31			PCB-134/143	ND	2.68		
PCB-89	ND	7.49			PCB-135	ND	9.41		
PCB-90/101	8.04			J	PCB-136	ND	6.57		
PCB-93	ND	7.74			PCB-137	ND	2.44		
PCB-94	ND	7.27			PCB-138/163/164	ND		2.63	
PCB-95/98/102	10.3			J	PCB-139/149	6.90			J
PCB-96	ND	5.64			PCB-140	ND	9.65		
PCB-97	ND	6.48			PCB-141	ND	2.49		
PCB-99	ND		3.80		PCB-144	ND	8.77		
PCB-100	ND	6.40			PCB-145	ND	6.86		
PCB-103	ND	6.37			PCB-146/165	ND	2.31		
PCB-104	ND	4.88			PCB-147	ND	9.63		
PCB-105	ND	1.65			PCB-148	ND	9.18		
PCB-106/118	3.27			J	PCB-150	ND	6.65		
PCB-107/109	ND	4.59			PCB-151	ND	9.17		
PCB-108/112	ND	5.98			PCB-152	ND	6.42		
PCB-110	5.42				PCB-153	ND		3.71	
PCB-111/115	ND	4.53			PCB-154	ND	8.43		
PCB-113	ND	5.56			PCB-155	ND	6.26		
PCB-114	ND	1.72			PCB-156	ND	2.00		
PCB-119	ND	4.48			PCB-157	ND	2.02		
PCB-120	ND	4.23			PCB-158/160	ND	1.97		
PCB-121	ND	4.67			PCB-159	ND	1.96		
PCB-122	ND	2.05			PCB-166	ND	2.09		
PCB-123	ND	4.89			PCB-167	ND	2.01		
PCB-124	ND	4.70			PCB-168	ND	1.84		
PCB-126	ND	2.15			PCB-169	ND	2.40		
PCB-127	ND	1.97			PCB-170	ND	2.06		
PCB-128/162	ND	2.31			PCB-171	ND	2.05		
PCB-129	ND	2.94			PCB-172	ND	2.20		
PCB-130	ND	3.12			PCB-173	ND	2.70		
PCB-131	ND	2.95			PCB-174	ND	2.32		
PCB-132/161	ND	2.23			PCB-175	ND	1.86		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank — EPA Method 1668C

Matrix: SPME

QC Batch: B5E0105
Date Extracted: 29-May-2015 8:34

Lab Sample: B5E0105-BLK1
Date Analyzed: 01-Jun-15 14:10 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-176	ND	1.33		
PCB-177	ND	2.36		
PCB-178	ND	1.81		
PCB-179	ND	1.40		
PCB-180	ND	2.06		
PCB-181	ND	2.21		
PCB-182/187	ND	1.71		
PCB-183	ND	1.59		
PCB-184	ND	1.45		
PCB-185	ND	2.12		
PCB-186	ND	1.33		
PCB-188	ND	1.28		
PCB-189	ND	1.65		
PCB-190	ND	1.53		
PCB-191	ND	1.60		
PCB-192	ND	1.72		
PCB-193	ND	1.61		
PCB-194	ND	2.22		
PCB-195	ND	2.52		
PCB-196/203	ND	5.59		
PCB-197	ND	3.97		
PCB-198	ND	6.15		
PCB-199	ND	6.25		
PCB-200	ND	4.48		
PCB-201	ND	4.23		
PCB-202	ND	4.55		
PCB-204	ND	4.31		
PCB-205	ND	1.78		
PCB-206	ND	3.70		
PCB-207	ND	1.76		
PCB-208	ND	1.79		
PCB-209	ND	2.59		
Total monoCB	16.1			
Total diCB	82.0			
Total triCB	259		271	
Total tetraCB	98.5		107	
Total pentaCB	27.0		30.8	
Total hexaCB	6.90		13.2	
Total heptaCB	ND	2.70		
Total octaCB	ND	6.25		
Total nonaCB	ND	3.70		
DecaCB	ND	2.59		
Total PCB	490			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: Method Blank

EPA Method 1668C

Matrix: SPME

QC Batch: B5E0105
Date Extracted: 29-May-2015 8:34

Lab Sample: B5E0105-BLK1
Date Analyzed: 01-Jun-15 14:10 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	60.6	5 - 145	
	13C-PCB-3	66.6	5 - 145	
	13C-PCB-4	62.4	5 - 145	
	13C-PCB-11	80.4	5 - 145	
	13C-PCB-9	68.0	5 - 145	
	13C-PCB-19	67.5	5 - 145	
	13C-PCB-28	76.7	5 - 145	
	13C-PCB-32	75.9	5 - 145	
	13C-PCB-37	82.6	5 - 145	
	13C-PCB-47	84.2	5 - 145	
	13C-PCB-52	86.0	5 - 145	
	13C-PCB-54	65.0	5 - 145	
	13C-PCB-70	92.3	5 - 145	
	13C-PCB-77	93.0	10 - 145	
	13C-PCB-80	92.1	10 - 145	
	13C-PCB-81	90.5	10 - 145	
	13C-PCB-95	86.3	10 - 145	
	13C-PCB-97	91.0	10 - 145	
	13C-PCB-101	88.6	10 - 145	
	13C-PCB-104	83.4	10 - 145	
	13C-PCB-105	127	10 - 145	
	13C-PCB-114	123	10 - 145	
	13C-PCB-118	92.3	10 - 145	
	13C-PCB-123	93.1	10 - 145	
	13C-PCB-126	120	10 - 145	
	13C-PCB-127	125	10 - 145	
	13C-PCB-138	98.6	10 - 145	
	13C-PCB-141	98.4	10 - 145	
	13C-PCB-153	97.8	10 - 145	
	13C-PCB-155	61.7	10 - 145	
	13C-PCB-156	94.7	10 - 145	
	13C-PCB-157	94.8	10 - 145	
	13C-PCB-159	97.8	10 - 145	
	13C-PCB-167	97.8	10 - 145	
	13C-PCB-169	96.3	10 - 145	
	13C-PCB-170	75.4	10 - 145	
	13C-PCB-180	75.6	10 - 145	
	13C-PCB-188	78.0	10 - 145	
	13C-PCB-189	76.0	10 - 145	
	13C-PCB-194	91.1	10 - 145	
	13C-PCB-202	58.7	10 - 145	
	13C-PCB-206	83.4	10 - 145	
	13C-PCB-208	68.5	10 - 145	
	13C-PCB-209	75.9	10 - 145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: OPR

EPA Method 1668C

Matrix: SPME

QC Batch: B5E0105
Date Extracted: 29-May-2015 8:34

Lab Sample: B5E0105-BS1
Date Analyzed: 01-Jun-15 12:00 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/Sample)	Spike Amt	%R	Limits
PCB-1	1670	2000	83.5	60 - 135
PCB-3	1660	2000	83.0	60 - 135
PCB-4/10	3680	4000	92.1	60 - 135
PCB-15	1850	2000	92.3	60 - 135
PCB-19	2090	2000	105	60 - 135
PCB-37	2050	2000	102	60 - 135
PCB-54	1980	2000	98.8	60 - 135
PCB-77	1890	2000	94.7	60 - 135
PCB-81	1850	2000	92.5	60 - 135
PCB-104	2080	2000	104	60 - 135
PCB-105	1750	2000	87.7	60 - 135
PCB-106/118	4270	4000	107	60 - 135
PCB-114	1800	2000	89.8	60 - 135
PCB-123	2170	2000	108	60 - 135
PCB-126	1870	2000	93.7	60 - 135
PCB-155	2130	2000	107	60 - 135
PCB-156	1910	2000	95.7	60 - 135
PCB-157	1940	2000	96.9	60 - 135
PCB-167	1910	2000	95.5	60 - 135
PCB-169	1990	2000	99.5	60 - 135
PCB-188	1990	2000	99.5	60 - 135
PCB-189	1990	2000	99.4	60 - 135
PCB-202	2090	2000	105	60 - 135
PCB-205	1920	2000	96.2	60 - 135
PCB-206	2060	2000	103	60 - 135
PCB-208	2050	2000	103	60 - 135
PCB-209	1960	2000	97.9	60 - 135

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-1	38.6	15 - 145
IS	13C-PCB-3	54.1	15 - 145
IS	13C-PCB-4	52.0	15 - 145
IS	13C-PCB-11	76.2	15 - 145
IS	13C-PCB-9	59.1	15 - 145
IS	13C-PCB-19	61.5	15 - 145
IS	13C-PCB-28	78.8	15 - 145
IS	13C-PCB-32	71.9	15 - 145
IS	13C-PCB-37	91.0	15 - 145
IS	13C-PCB-47	87.9	15 - 145
IS	13C-PCB-52	90.0	15 - 145
IS	13C-PCB-54	67.1	15 - 145
IS	13C-PCB-70	97.6	15 - 145
IS	13C-PCB-77	95.2	40 - 145
IS	13C-PCB-80	95.7	40 - 145
IS	13C-PCB-81	95.4	40 - 145
IS	13C-PCB-95	93.2	40 - 145
IS	13C-PCB-97	95.7	40 - 145
IS	13C-PCB-101	92.3	40 - 145
IS	13C-PCB-104	90.5	40 - 145
IS	13C-PCB-105	134	40 - 145
IS	13C-PCB-114	128	40 - 145
IS	13C-PCB-118	96.9	40 - 145
IS	13C-PCB-123	98.1	40 - 145
IS	13C-PCB-126	131	40 - 145
IS	13C-PCB-127	133	40 - 145
IS	13C-PCB-138	104	40 - 145
IS	13C-PCB-141	104	40 - 145
IS	13C-PCB-153	104	40 - 145
IS	13C-PCB-155	61.5	40 - 145
IS	13C-PCB-156	101	40 - 145
IS	13C-PCB-157	99.7	40 - 145
IS	13C-PCB-159	105	40 - 145
IS	13C-PCB-167	104	40 - 145
IS	13C-PCB-169	102	40 - 145
IS	13C-PCB-170	78.7	40 - 145
IS	13C-PCB-180	80.3	40 - 145
IS	13C-PCB-188	80.8	40 - 145
IS	13C-PCB-189	77.3	40 - 145
IS	13C-PCB-194	96.0	40 - 145

Sample ID: OPR

EPA Method 1668C

Matrix: SPME

QC Batch: B5E0105
Date Extracted: 29-May-2015 8:34

Lab Sample: B5E0105-BS1
Date Analyzed: 01-Jun-15 12:00 Column: ZB-1 Analyst: DMS

Analyte	Amt Found (pg/Sample)	Spike Amt	%R	Limits

	Labeled Standard	%R	LCL-UCL
IS	13C-PCB-202	59.8	40 - 145
IS	13C-PCB-206	85.9	40 - 145
IS	13C-PCB-208	75.0	40 - 145
IS	13C-PCB-209	79.0	40 - 145

LCL-UCL - Lower control limit - upper control limit

Sample ID: FB-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-01 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 15:14 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	48.9			B
PCB-2	6.48			
PCB-3	28.1			B
PCB-4/10	52.6			
PCB-5/8	152			B
PCB-6	30.8			
PCB-7/9	15.7			
PCB-11	51.8			B
PCB-12/13	ND	10.7		
PCB-14	ND	9.21		
PCB-15	31.3			B
PCB-16/32	97.9			B
PCB-17	65.2			B
PCB-18	144			B
PCB-19	17.8			
PCB-20/21/33	93.3			B
PCB-22	44.6			B
PCB-23	ND	0.945		
PCB-24/27	11.8			
PCB-25	11.7			B
PCB-26	18.9			B
PCB-28	115			B
PCB-29	ND	0.945		
PCB-30	ND	1.10		
PCB-31	96.4			B
PCB-34	ND	0.879		
PCB-35	ND	0.908		
PCB-36	ND	0.877		
PCB-37	ND		11.9	
PCB-38	ND	0.918		
PCB-39	ND	0.904		
PCB-40	6.62			
PCB-41/64/71/72	31.7			B
PCB-42/59	13.7			
PCB-43/49	28.0			B

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	37.1			B
PCB-45	9.62			B
PCB-46	3.43			J
PCB-47	20.5			B
PCB-48/75	9.63			J
PCB-50	ND	1.71		
PCB-51	4.94			J
PCB-52/69	43.8			B
PCB-53	9.43			B
PCB-54	ND	1.30		
PCB-55	ND	0.993		
PCB-56/60	11.8			B
PCB-57	ND	1.10		
PCB-58	ND	1.09		
PCB-61/70	25.0			B
PCB-62	ND	1.17		
PCB-63	ND	1.06		
PCB-65	ND	1.21		
PCB-66/76	17.2			B
PCB-67	ND	1.13		
PCB-68	3.03			J
PCB-73	ND	1.15		
PCB-74	10.4			B
PCB-77	ND	1.01		
PCB-78	ND	1.07		
PCB-79	ND	1.05		
PCB-80	ND	0.922		
PCB-81	ND	0.978		
PCB-82	ND	3.86		
PCB-83	ND	2.29		
PCB-84/92	8.20			J
PCB-85/116	ND	2.73		
PCB-86	ND	3.68		
PCB-87/117/125	6.75			J
PCB-88/91	5.48			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-01 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 15:14 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	ND	3.39		
PCB-90/101	24.6			B
PCB-93	ND	3.53		
PCB-94	ND	3.31		
PCB-95/98/102	22.5			B
PCB-96	ND	2.50		
PCB-97	ND		4.25	
PCB-99	8.21			
PCB-100	ND	2.83		
PCB-103	ND	2.82		
PCB-104	ND	2.16		
PCB-105	1.76			J
PCB-106/118	7.21			J, B
PCB-107/109	ND	2.14		
PCB-108/112	ND	2.70		
PCB-110	15.3			B
PCB-111/115	ND	2.05		
PCB-113	ND	2.52		
PCB-114	ND	1.37		
PCB-119	ND	2.02		
PCB-120	ND	1.91		
PCB-121	ND	2.13		
PCB-122	ND	1.63		
PCB-123	ND	2.29		
PCB-124	ND	2.20		
PCB-126	ND	1.61		
PCB-127	ND	1.52		
PCB-128/162	ND	1.90		
PCB-129	ND	2.33		
PCB-130	ND	2.65		
PCB-131	ND	2.42		
PCB-132/161	ND		2.34	
PCB-133/142	ND	2.25		
PCB-134/143	ND	2.19		
PCB-135	ND	4.63		
PCB-136	3.73			J
PCB-137	ND	2.07		
PCB-138/163/164	7.05			J
PCB-139/149	22.1			B
PCB-140	ND	4.75		
PCB-141	2.56			J
PCB-144	ND	4.31		
PCB-145	ND	3.38		
PCB-146/165	1.77			J
PCB-147	ND	4.74		
PCB-148	ND	4.51		
PCB-150	ND	3.27		
PCB-151	9.68			
PCB-152	ND	3.16		
PCB-153	14.3			
PCB-154	ND	4.15		
PCB-155	ND	3.08		
PCB-156	ND	1.63		
PCB-157	ND	1.71		
PCB-158/160	ND	1.56		
PCB-159	ND	1.61		
PCB-166	ND	1.72		
PCB-167	ND	1.67		
PCB-168	ND	1.51		
PCB-169	ND	2.05		
PCB-170	ND	1.96		
PCB-171	ND	1.94		
PCB-172	ND	2.09		
PCB-173	ND	2.56		
PCB-174	ND		7.60	
PCB-175	ND	1.74		
PCB-176	ND	1.25		
PCB-177	ND	2.23		
PCB-178	ND	1.69		
PCB-179	9.86			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-01 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 15:14 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	9.28			
PCB-181	ND	2.09		
PCB-182/187	16.2			
PCB-183	4.70			J
PCB-184	ND	1.36		
PCB-185	ND	2.01		
PCB-186	ND	1.25		
PCB-188	ND	1.19		
PCB-189	ND	1.73		
PCB-190	ND	1.46		
PCB-191	ND	1.52		
PCB-192	ND	1.63		
PCB-193	ND	1.53		
PCB-194	3.06			J
PCB-195	ND	2.35		
PCB-196/203	6.20			J
PCB-197	ND	2.86		
PCB-198	ND	4.43		
PCB-199	8.07			
PCB-200	ND	3.23		
PCB-201	ND	3.05		
PCB-202	5.88			
PCB-204	ND	3.11		
PCB-205	ND	1.66		
PCB-206	ND	4.09		
PCB-207	ND	1.67		
PCB-208	ND	1.69		
PCB-209	ND	3.22		
Total monoCB	83.4			B
Total diCB	335			B
Total triCB	717		729	B
Total tetraCB	286			B
Total pentaCB	100		104	B
Total hexaCB	61.1		63.5	B
Total heptaCB	40.0		47.6	

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	23.2			
Total nonaCB	ND	4.09		
DecaCB	ND	3.22		
Total PCB	1650			B
13C-PCB-8	ND	3.79		
13C-PCB-31	ND	31.4		
13C-PCB-79	ND	10.3		
13C-PCB-133	ND	4.96		
13C-PCB-178	ND	12.9		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:30

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-01 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 15:14 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	85.0	5 -145	
	13C-PCB-3	86.9	5 -145	
	13C-PCB-4	77.9	5 -145	
	13C-PCB-11	85.1	5 -145	
	13C-PCB-9	80.2	5 -145	
	13C-PCB-19	71.8	5 -145	
	13C-PCB-28	85.5	5 -145	
	13C-PCB-32	74.6	5 -145	
	13C-PCB-37	88.6	5 -145	
	13C-PCB-47	90.0	5 -145	
	13C-PCB-52	93.5	5 -145	
	13C-PCB-54	78.9	5 -145	
	13C-PCB-70	93.6	5 -145	
	13C-PCB-77	95.9	10 -145	
	13C-PCB-80	94.4	10 -145	
	13C-PCB-81	93.8	10 -145	
	13C-PCB-95	90.8	10 -145	
	13C-PCB-97	95.2	10 -145	
	13C-PCB-101	92.2	10 -145	
	13C-PCB-104	87.2	10 -145	
	13C-PCB-105	124	10 -145	
	13C-PCB-114	122	10 -145	
	13C-PCB-118	93.6	10 -145	
	13C-PCB-123	96.0	10 -145	
	13C-PCB-126	121	10 -145	
	13C-PCB-127	122	10 -145	
	13C-PCB-138	101	10 -145	
	13C-PCB-141	102	10 -145	
	13C-PCB-153	101	10 -145	
	13C-PCB-155	65.1	10 -145	
	13C-PCB-156	97.1	10 -145	
	13C-PCB-157	94.8	10 -145	
	13C-PCB-159	98.7	10 -145	
	13C-PCB-167	98.4	10 -145	
	13C-PCB-169	96.0	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	76.5	10 -145	
13C-PCB-180	75.9	10 -145	
13C-PCB-188	80.8	10 -145	
13C-PCB-189	71.0	10 -145	
13C-PCB-194	94.4	10 -145	
13C-PCB-202	59.6	10 -145	
13C-PCB-206	81.1	10 -145	
13C-PCB-208	79.2	10 -145	
13C-PCB-209	69.6	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR1-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-02 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 16:19 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	4.27			J, B
PCB-2	ND	1.89		
PCB-3	2.38			J, B
PCB-4/10	ND	11.5		
PCB-5/8	17.2			B
PCB-6	ND	9.16		
PCB-7/9	ND	9.05		
PCB-11	10.7			B
PCB-12/13	ND	8.77		
PCB-14	ND	7.55		
PCB-15	ND	7.71		
PCB-16/32	12.9			B
PCB-17	7.61			B
PCB-18	17.2			B
PCB-19	ND	1.22		
PCB-20/21/33	ND		11.8	
PCB-22	ND		5.43	
PCB-23	ND	0.846		
PCB-24/27	ND	0.769		
PCB-25	ND	0.933		
PCB-26	2.49			J, B
PCB-28	ND		11.6	
PCB-29	ND	0.847		
PCB-30	ND	0.770		
PCB-31	11.6			B
PCB-34	ND	0.787		
PCB-35	ND	0.815		
PCB-36	ND	0.788		
PCB-37	ND	0.759		
PCB-38	ND	0.824		
PCB-39	ND	0.812		
PCB-40	ND	1.91		
PCB-41/64/71/72	4.74			J, B
PCB-42/59	ND	1.32		
PCB-43/49	ND		3.51	

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	5.29			B
PCB-45	ND	1.62		
PCB-46	ND	1.77		
PCB-47	3.93			J, B
PCB-48/75	1.68			J
PCB-50	ND	1.67		
PCB-51	ND	1.45		
PCB-52/69	5.81			J, B
PCB-53	ND	1.48		
PCB-54	ND	1.27		
PCB-55	ND	0.946		
PCB-56/60	2.17			J, B
PCB-57	ND	1.06		
PCB-58	ND	1.05		
PCB-61/70	3.92			J, B
PCB-62	ND	1.20		
PCB-63	ND	1.02		
PCB-65	ND	1.24		
PCB-66/76	2.22			J, B
PCB-67	ND	1.09		
PCB-68	ND	1.01		
PCB-73	ND	1.19		
PCB-74	1.85			J, B
PCB-77	ND	0.975		
PCB-78	ND	1.07		
PCB-79	ND	1.00		
PCB-80	ND	0.879		
PCB-81	ND	0.979		
PCB-82	ND	4.66		
PCB-83	ND	2.89		
PCB-84/92	ND	3.96		
PCB-85/116	ND	3.45		
PCB-86	ND	4.65		
PCB-87/117/125	ND	3.02		
PCB-88/91	ND	4.11		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR1-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-02 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 16:19 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	ND	4.26		
PCB-90/101	ND	3.52		
PCB-93	ND	4.35		
PCB-94	ND	4.09		
PCB-95/98/102	ND	3.59		
PCB-96	ND	3.15		
PCB-97	ND	3.70		
PCB-99	ND	3.40		
PCB-100	ND	3.57		
PCB-103	ND	3.56		
PCB-104	ND	2.72		
PCB-105	ND	1.15		
PCB-106/118	ND	2.63		
PCB-107/109	ND	2.59		
PCB-108/112	ND	3.41		
PCB-110	ND	2.82		
PCB-111/115	ND	2.59		
PCB-113	ND	3.17		
PCB-114	ND	1.15		
PCB-119	ND	2.55		
PCB-120	ND	2.42		
PCB-121	ND	2.62		
PCB-122	ND	1.37		
PCB-123	ND	2.77		
PCB-124	ND	2.66		
PCB-126	ND	1.34		
PCB-127	ND	1.29		
PCB-128/162	ND	1.51		
PCB-129	ND	1.82		
PCB-130	ND	2.00		
PCB-131	ND	1.85		
PCB-132/161	ND	1.40		
PCB-133/142	ND	1.72		
PCB-134/143	ND	1.68		
PCB-135	ND	4.33		

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	ND	3.02		
PCB-137	ND	1.56		
PCB-138/163/164	ND	1.31		
PCB-139/149	ND	3.96		
PCB-140	ND	4.44		
PCB-141	ND	1.59		
PCB-144	ND	4.03		
PCB-145	ND	3.16		
PCB-146/165	ND	1.45		
PCB-147	ND	4.43		
PCB-148	ND	4.22		
PCB-150	ND	3.06		
PCB-151	ND	4.22		
PCB-152	ND	2.95		
PCB-153	ND		1.82	
PCB-154	ND	3.88		
PCB-155	ND	2.88		
PCB-156	ND	1.24		
PCB-157	ND	1.27		
PCB-158/160	ND	1.22		
PCB-159	ND	1.28		
PCB-166	ND	1.37		
PCB-167	ND	1.26		
PCB-168	ND	1.15		
PCB-169	ND	1.46		
PCB-170	ND	1.31		
PCB-171	ND	1.27		
PCB-172	ND	1.37		
PCB-173	ND	1.68		
PCB-174	ND	1.44		
PCB-175	ND	1.27		
PCB-176	ND	0.917		
PCB-177	ND	1.46		
PCB-178	ND	1.24		
PCB-179	ND	0.959		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR1-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-02 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 16:19 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	ND	1.28		
PCB-181	ND	1.37		
PCB-182/187	ND	1.17		
PCB-183	ND	1.09		
PCB-184	ND	0.997		
PCB-185	ND	1.32		
PCB-186	ND	0.916		
PCB-188	ND	0.877		
PCB-189	ND	1.07		
PCB-190	ND	0.973		
PCB-191	ND	0.996		
PCB-192	ND	1.07		
PCB-193	ND	1.00		
PCB-194	ND	1.35		
PCB-195	ND	1.53		
PCB-196/203	ND	3.08		
PCB-197	ND	2.19		
PCB-198	ND	3.39		
PCB-199	ND	3.44		
PCB-200	ND	2.47		
PCB-201	ND	2.33		
PCB-202	ND	2.51		
PCB-204	ND	2.38		
PCB-205	ND	1.08		
PCB-206	ND	2.74		
PCB-207	ND	1.20		
PCB-208	ND	1.21		
PCB-209	ND	2.41		
Total monoCB	6.65			B
Total diCB	27.8			B
Total triCB	51.8		80.7	B
Total tetraCB	31.6		35.1	B
Total pentaCB	ND	4.66		
Total hexaCB	ND		1.82	
Total heptaCB	ND	1.68		

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	ND	3.44		
Total nonaCB	ND	2.74		
DecaCB	ND	2.41		
Total PCB	118			B
13C-PCB-8	1320			
13C-PCB-31	1490			
13C-PCB-79	1390			
13C-PCB-133	1070			
13C-PCB-178	901			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR1-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-02 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 16:19 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	71.9	5 -145	
	13C-PCB-3	83.6	5 -145	
	13C-PCB-4	75.8	5 -145	
	13C-PCB-11	85.5	5 -145	
	13C-PCB-9	80.4	5 -145	
	13C-PCB-19	72.1	5 -145	
	13C-PCB-28	90.7	5 -145	
	13C-PCB-32	75.4	5 -145	
	13C-PCB-37	90.9	5 -145	
	13C-PCB-47	90.0	5 -145	
	13C-PCB-52	93.3	5 -145	
	13C-PCB-54	78.7	5 -145	
	13C-PCB-70	96.4	5 -145	
	13C-PCB-77	98.5	10 -145	
	13C-PCB-80	95.5	10 -145	
	13C-PCB-81	96.0	10 -145	
	13C-PCB-95	85.2	10 -145	
	13C-PCB-97	87.9	10 -145	
	13C-PCB-101	87.4	10 -145	
	13C-PCB-104	82.8	10 -145	
	13C-PCB-105	127	10 -145	
	13C-PCB-114	123	10 -145	
	13C-PCB-118	91.3	10 -145	
	13C-PCB-123	93.0	10 -145	
	13C-PCB-126	132	10 -145	
	13C-PCB-127	127	10 -145	
	13C-PCB-138	102	10 -145	
	13C-PCB-141	102	10 -145	
	13C-PCB-153	102	10 -145	
	13C-PCB-155	65.3	10 -145	
	13C-PCB-156	105	10 -145	
	13C-PCB-157	103	10 -145	
	13C-PCB-159	102	10 -145	
	13C-PCB-167	104	10 -145	
	13C-PCB-169	107	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	85.0	10 -145	
13C-PCB-180	85.8	10 -145	
13C-PCB-188	83.2	10 -145	
13C-PCB-189	86.6	10 -145	
13C-PCB-194	94.5	10 -145	
13C-PCB-202	66.5	10 -145	
13C-PCB-206	85.6	10 -145	
13C-PCB-208	73.4	10 -145	
13C-PCB-209	82.2	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR2-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-03 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 17:24 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	5.88			B
PCB-2	ND	2.92		
PCB-3	3.73			J, B
PCB-4/10	7.95			J
PCB-5/8	29.6			B
PCB-6	6.54			
PCB-7/9	ND	10.2		
PCB-11	20.7			B
PCB-12/13	ND	9.75		
PCB-14	ND	8.40		
PCB-15	8.53			B
PCB-16/32	27.9			B
PCB-17	18.4			B
PCB-18	43.7			B
PCB-19	ND	1.88		
PCB-20/21/33	31.2			B
PCB-22	16.7			B
PCB-23	ND	1.01		
PCB-24/27	ND		3.47	
PCB-25	4.76			J, B
PCB-26	7.87			B
PCB-28	37.9			B
PCB-29	ND	1.01		
PCB-30	ND	1.19		
PCB-31	42.8			B
PCB-34	ND	0.941		
PCB-35	ND	1.02		
PCB-36	ND	0.981		
PCB-37	5.91			B
PCB-38	ND	1.03		
PCB-39	ND	1.01		
PCB-40	6.16			
PCB-41/64/71/72	27.4			B
PCB-42/59	11.3			
PCB-43/49	28.0			B
PCB-44	34.2			B
PCB-45	ND		4.74	
PCB-46	ND		2.83	
PCB-47	15.3			B
PCB-48/75	7.33			J
PCB-50	ND	1.91		
PCB-51	3.20			J
PCB-52/69	35.6			B
PCB-53	ND		4.80	
PCB-54	ND	1.45		
PCB-55	ND	1.12		
PCB-56/60	15.3			B
PCB-57	ND	1.28		
PCB-58	ND	1.26		
PCB-61/70	29.6			B
PCB-62	ND	1.37		
PCB-63	1.31			J
PCB-65	ND	1.41		
PCB-66/76	22.1			B
PCB-67	ND	1.31		
PCB-68	1.97			J
PCB-73	ND	1.39		
PCB-74	13.5			B
PCB-77	2.52			J
PCB-78	ND	1.19		
PCB-79	ND	1.19		
PCB-80	ND	1.04		
PCB-81	ND	1.09		
PCB-82	ND	4.91		
PCB-83	ND	3.23		
PCB-84/92	14.8			
PCB-85/116	ND	3.86		
PCB-86	ND	5.20		
PCB-87/117/125	10.2			J
PCB-88/91	5.29			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR2-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-03 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 17:24 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	ND	4.53		
PCB-90/101	26.0			B
PCB-93	ND	4.88		
PCB-94	ND	4.59		
PCB-95/98/102	23.0			B
PCB-96	ND	3.60		
PCB-97	8.38			
PCB-99	12.4			
PCB-100	ND	4.08		
PCB-103	ND	4.06		
PCB-104	ND	3.11		
PCB-105	6.42			
PCB-106/118	16.6			B
PCB-107/109	ND	2.73		
PCB-108/112	ND	3.82		
PCB-110	27.9			B
PCB-111/115	ND	2.89		
PCB-113	ND	3.36		
PCB-114	ND	1.63		
PCB-119	ND	2.86		
PCB-120	ND	2.70		
PCB-121	ND	2.94		
PCB-122	ND	1.94		
PCB-123	ND	2.91		
PCB-124	ND	2.80		
PCB-126	ND	1.85		
PCB-127	ND	1.73		
PCB-128/162	4.16			J
PCB-129	ND	2.35		
PCB-130	ND	2.60		
PCB-131	ND	2.54		
PCB-132/161	5.73			J
PCB-133/142	ND	2.36		
PCB-134/143	ND	2.31		
PCB-135	ND	4.96		
PCB-136	3.57			J
PCB-137	ND	2.03		
PCB-138/163/164	21.3			
PCB-139/149	22.7			B
PCB-140	ND	5.09		
PCB-141	4.73			J
PCB-144	ND	4.62		
PCB-145	ND	3.62		
PCB-146/165	4.06			J
PCB-147	ND	5.08		
PCB-148	ND	4.84		
PCB-150	ND	3.51		
PCB-151	7.11			
PCB-152	ND	3.38		
PCB-153	20.3			
PCB-154	ND	4.44		
PCB-155	ND	3.30		
PCB-156	2.63			J
PCB-157	ND	1.67		
PCB-158/160	2.78			J
PCB-159	ND	1.58		
PCB-166	ND	1.70		
PCB-167	ND	1.68		
PCB-168	ND	1.58		
PCB-169	ND	1.94		
PCB-170	5.20			
PCB-171	ND	1.94		
PCB-172	ND	2.09		
PCB-173	ND	2.56		
PCB-174	ND		6.63	
PCB-175	ND	1.89		
PCB-176	ND	1.36		
PCB-177	ND		4.84	
PCB-178	ND	1.84		
PCB-179	ND		5.25	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR2-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-03 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 17:24 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	17.1			
PCB-181	ND	2.10		
PCB-182/187	11.3			
PCB-183	4.93			J
PCB-184	ND	1.48		
PCB-185	ND	2.01		
PCB-186	ND	1.36		
PCB-188	ND	1.30		
PCB-189	ND	1.59		
PCB-190	ND	1.41		
PCB-191	ND	1.52		
PCB-192	ND	1.63		
PCB-193	ND	1.53		
PCB-194	ND		3.74	
PCB-195	ND	2.22		
PCB-196/203	6.19			J
PCB-197	ND	2.98		
PCB-198	ND	4.61		
PCB-199	7.21			
PCB-200	ND	3.36		
PCB-201	ND	3.17		
PCB-202	ND	3.41		
PCB-204	ND	3.24		
PCB-205	ND	1.57		
PCB-206	ND		2.95	
PCB-207	ND	1.39		
PCB-208	ND	1.41		
PCB-209	ND	2.69		
Total monoCB	9.61			B
Total diCB	73.4			B
Total triCB	237		241	B
Total tetraCB	255		267	B
Total pentaCB	151			B
Total hexaCB	99.1			B
Total heptaCB	38.5		55.2	

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
Total octaCB	13.4		17.1	
Total nonaCB	ND		2.95	J
DecaCB	ND	2.69		
Total PCB	877			B
13C-PCB-8	1300			
13C-PCB-31	1560			
13C-PCB-79	1590			
13C-PCB-133	1140			
13C-PCB-178	1030			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR2-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-03 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 17:24 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	73.2	5 -145	
	13C-PCB-3	79.8	5 -145	
	13C-PCB-4	75.4	5 -145	
	13C-PCB-11	86.1	5 -145	
	13C-PCB-9	77.5	5 -145	
	13C-PCB-19	70.4	5 -145	
	13C-PCB-28	90.0	5 -145	
	13C-PCB-32	74.6	5 -145	
	13C-PCB-37	92.1	5 -145	
	13C-PCB-47	89.4	5 -145	
	13C-PCB-52	94.9	5 -145	
	13C-PCB-54	80.1	5 -145	
	13C-PCB-70	95.6	5 -145	
	13C-PCB-77	97.6	10 -145	
	13C-PCB-80	94.5	10 -145	
	13C-PCB-81	95.3	10 -145	
	13C-PCB-95	86.2	10 -145	
	13C-PCB-97	91.6	10 -145	
	13C-PCB-101	89.2	10 -145	
	13C-PCB-104	83.9	10 -145	
	13C-PCB-105	124	10 -145	
	13C-PCB-114	122	10 -145	
	13C-PCB-118	95.5	10 -145	
	13C-PCB-123	97.8	10 -145	
	13C-PCB-126	128	10 -145	
	13C-PCB-127	126	10 -145	
	13C-PCB-138	103	10 -145	
	13C-PCB-141	103	10 -145	
	13C-PCB-153	101	10 -145	
	13C-PCB-155	67.5	10 -145	
	13C-PCB-156	105	10 -145	
	13C-PCB-157	103	10 -145	
	13C-PCB-159	103	10 -145	
	13C-PCB-167	105	10 -145	
	13C-PCB-169	108	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	85.1	10 -145	
13C-PCB-180	84.5	10 -145	
13C-PCB-188	80.7	10 -145	
13C-PCB-189	85.8	10 -145	
13C-PCB-194	96.6	10 -145	
13C-PCB-202	67.4	10 -145	
13C-PCB-206	88.9	10 -145	
13C-PCB-208	75.8	10 -145	
13C-PCB-209	83.5	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR3-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-04 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 18:28 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-1	5.51			B
PCB-2	ND	2.47		
PCB-3	2.84			J, B
PCB-4/10	ND	6.26		
PCB-5/8	20.7			B
PCB-6	ND	5.02		
PCB-7/9	ND	4.96		
PCB-11	13.5			B
PCB-12/13	ND	4.71		
PCB-14	ND	4.06		
PCB-15	ND	4.14		
PCB-16/32	13.6			B
PCB-17	8.64			B
PCB-18	18.5			B
PCB-19	ND	2.01		
PCB-20/21/33	11.3			J, B
PCB-22	6.64			B
PCB-23	ND	1.50		
PCB-24/27	ND	1.17		
PCB-25	ND	1.65		
PCB-26	ND	1.46		
PCB-28	13.6			B
PCB-29	ND	1.50		
PCB-30	ND	1.27		
PCB-31	11.1			B
PCB-34	ND	1.39		
PCB-35	ND	1.56		
PCB-36	ND	1.51		
PCB-37	ND	1.45		
PCB-38	ND	1.57		
PCB-39	ND	1.55		
PCB-40	ND	2.88		
PCB-41/64/71/72	5.40			J, B
PCB-42/59	ND		3.00	
PCB-43/49	4.07			J, B

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-44	7.42			B
PCB-45	ND	2.46		
PCB-46	ND	2.70		
PCB-47	6.08			B
PCB-48/75	ND	1.86		
PCB-50	ND	2.58		
PCB-51	ND	2.20		
PCB-52/69	6.51			J, B
PCB-53	ND	2.25		
PCB-54	ND	1.96		
PCB-55	ND	1.45		
PCB-56/60	ND	1.61		
PCB-57	ND	1.65		
PCB-58	ND	1.62		
PCB-61/70	ND		3.22	
PCB-62	ND	1.82		
PCB-63	ND	1.59		
PCB-65	ND	1.87		
PCB-66/76	2.88			J, B
PCB-67	ND	1.69		
PCB-68	ND	1.53		
PCB-73	ND	1.81		
PCB-74	1.59			J, B
PCB-77	ND	1.46		
PCB-78	ND	1.54		
PCB-79	ND	1.54		
PCB-80	ND	1.35		
PCB-81	ND	1.41		
PCB-82	ND	7.32		
PCB-83	ND	4.35		
PCB-84/92	ND	5.72		
PCB-85/116	ND	5.19		
PCB-86	ND	7.00		
PCB-87/117/125	ND	4.54		
PCB-88/91	ND	6.29		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR3-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-04 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 18:28 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-89	ND	6.15		
PCB-90/101	ND	5.08		
PCB-93	ND	6.65		
PCB-94	ND	6.25		
PCB-95/98/102	ND	5.48		
PCB-96	ND	4.94		
PCB-97	ND	5.57		
PCB-99	ND	4.91		
PCB-100	ND	5.60		
PCB-103	ND	5.57		
PCB-104	ND	4.27		
PCB-105	ND	1.78		
PCB-106/118	ND	3.82		
PCB-107/109	ND	4.07		
PCB-108/112	ND	5.14		
PCB-110	ND	4.25		
PCB-111/115	ND	3.89		
PCB-113	ND	4.57		
PCB-114	ND	1.84		
PCB-119	ND	3.85		
PCB-120	ND	3.64		
PCB-121	ND	4.01		
PCB-122	ND	2.19		
PCB-123	ND	4.34		
PCB-124	ND	4.17		
PCB-126	ND	2.15		
PCB-127	ND	2.04		
PCB-128/162	ND	2.36		
PCB-129	ND	2.81		
PCB-130	ND	3.11		
PCB-131	ND	2.88		
PCB-132/161	ND	2.18		
PCB-133/142	ND	2.68		
PCB-134/143	ND	2.62		
PCB-135	ND	6.88		

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-136	ND	4.80		
PCB-137	ND	2.43		
PCB-138/163/164	ND	2.02		
PCB-139/149	ND	6.30		
PCB-140	ND	7.06		
PCB-141	ND	2.47		
PCB-144	ND	6.41		
PCB-145	ND	5.02		
PCB-146/165	ND	2.25		
PCB-147	ND	7.04		
PCB-148	ND	6.71		
PCB-150	ND	4.86		
PCB-151	ND	6.71		
PCB-152	ND	4.69		
PCB-153	ND	2.04		
PCB-154	ND	6.16		
PCB-155	ND	4.58		
PCB-156	ND	1.94		
PCB-157	ND	2.01		
PCB-158/160	ND	1.89		
PCB-159	ND	2.00		
PCB-166	ND	2.14		
PCB-167	ND	1.95		
PCB-168	ND	1.80		
PCB-169	ND	2.31		
PCB-170	ND	2.03		
PCB-171	ND	1.92		
PCB-172	ND	2.06		
PCB-173	ND	2.53		
PCB-174	ND	2.17		
PCB-175	ND	1.80		
PCB-176	ND	1.29		
PCB-177	ND	2.21		
PCB-178	ND	1.75		
PCB-179	ND	1.35		

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR3-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-04 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 18:28 Column: ZB-1 Analyst: DMS

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
PCB-180	ND	1.93		
PCB-181	ND	2.07		
PCB-182/187	ND	1.66		
PCB-183	ND	1.54		
PCB-184	ND	1.41		
PCB-185	ND	1.99		
PCB-186	ND	1.29		
PCB-188	ND	1.24		
PCB-189	ND	1.64		
PCB-190	ND	1.51		
PCB-191	ND	1.50		
PCB-192	ND	1.61		
PCB-193	ND	1.51		
PCB-194	ND	1.82		
PCB-195	ND	2.07		
PCB-196/203	ND	4.24		
PCB-197	ND	3.01		
PCB-198	ND	4.66		
PCB-199	ND	4.74		
PCB-200	ND	3.39		
PCB-201	ND	3.20		
PCB-202	ND	3.45		
PCB-204	ND	3.27		
PCB-205	ND	1.46		
PCB-206	ND	3.69		
PCB-207	ND	1.71		
PCB-208	ND	1.73		
PCB-209	ND	3.11		
Total monoCB	8.35			B
Total diCB	34.1			B
Total triCB	83.3			B
Total tetraCB	34.0		40.2	B
Total pentaCB	ND	7.32		
Total hexaCB	ND	7.06		
Total heptaCB	ND	2.53		
Total octaCB	ND	4.74		
Total nonaCB	ND	3.69		
DecaCB	ND	3.11		
Total PCB	160			B
13C-PCB-8	1280			
13C-PCB-31	1690			
13C-PCB-79	1610			
13C-PCB-133	1270			
13C-PCB-178	1090			

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Sample ID: FB PCR3-20150506

EPA Method 1668C

Client Data
Name: Ramboll Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500414-04 Date Received: 07-May-2015 10:12
QC Batch: B5E0105 Date Extracted: 29-May-2015 8:34
Date Analyzed : 01-Jun-15 18:28 Column: ZB-1 Analyst: DMS

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C-PCB-1	70.0	5 -145	
	13C-PCB-3	74.9	5 -145	
	13C-PCB-4	71.1	5 -145	
	13C-PCB-11	84.2	5 -145	
	13C-PCB-9	75.7	5 -145	
	13C-PCB-19	66.6	5 -145	
	13C-PCB-28	90.5	5 -145	
	13C-PCB-32	72.1	5 -145	
	13C-PCB-37	87.7	5 -145	
	13C-PCB-47	86.8	5 -145	
	13C-PCB-52	91.7	5 -145	
	13C-PCB-54	77.3	5 -145	
	13C-PCB-70	92.9	5 -145	
	13C-PCB-77	97.6	10 -145	
	13C-PCB-80	93.7	10 -145	
	13C-PCB-81	94.6	10 -145	
	13C-PCB-95	81.3	10 -145	
	13C-PCB-97	87.1	10 -145	
	13C-PCB-101	85.5	10 -145	
	13C-PCB-104	77.5	10 -145	
	13C-PCB-105	126	10 -145	
	13C-PCB-114	125	10 -145	
	13C-PCB-118	89.6	10 -145	
	13C-PCB-123	90.2	10 -145	
	13C-PCB-126	127	10 -145	
	13C-PCB-127	130	10 -145	
	13C-PCB-138	106	10 -145	
	13C-PCB-141	107	10 -145	
	13C-PCB-153	106	10 -145	
	13C-PCB-155	65.3	10 -145	
	13C-PCB-156	103	10 -145	
	13C-PCB-157	101	10 -145	
	13C-PCB-159	103	10 -145	
	13C-PCB-167	105	10 -145	
	13C-PCB-169	105	10 -145	

Labeled Standard	%R	LCL-UCL	Qualifiers
13C-PCB-170	85.1	10 -145	
13C-PCB-180	86.4	10 -145	
13C-PCB-188	87.9	10 -145	
13C-PCB-189	84.7	10 -145	
13C-PCB-194	96.0	10 -145	
13C-PCB-202	67.8	10 -145	
13C-PCB-206	86.5	10 -145	
13C-PCB-208	72.8	10 -145	
13C-PCB-209	81.2	10 -145	

DL - Sample specifc estimated detection limit

LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

Vial Masses

Vial Number	Lab ID	Initial Mass (g)	Final Mass (g)	Hexane Volume (mL)
77	1500414-01	36.6277	40.4730	60
79	1500414-02	36.9621	37.6235	60
80	1500414-03	36.7637	37.4296	60
81	1500414-04	37.3069	37.9635	60

Please note that the final masses include additional vial labels; the approximate label mass is 0.2677g.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

ENVIRON

CHAIN-of-CUSTODY

№ 09705

1500414 1.5°C

PAGE 1 of 1

☒ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)

☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)

☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

MSA#: — WO#: —

PROJECT NAME / FACILITY ID: POLA/POLB LDL Phase 2.

FIELD PERSON: J. Arblaster

PROJECT NUMBER: 04 33310A11 DATE: May 6 2015

PROJECT MANAGER: D. Moore

PROJECT LOCATION: San Pedro / Long Beach

LABORATORY: Vista

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #:

SAMPLER: J. Arblaster

SIGNATURE:

SAMPLE I.D. NUMBER	YEAR 2015 SAMPLE DATE	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED / UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED: 8081 PCB + PCRs EPA 1668B	8082 PCB + PCRs EPA 1699									COMMENTS
FB-20150506	5/6	0930	—	—	SPME	1	—	—	X										Vial 77
* FB-20150506	↓	0930	↓	↓	↓	↓	↓	↓		X									Vial 78
FBPCR1-20150506		0945							X										Vial 79
FBPCR2-20150506		0945							X										Vial 80
FBPCR3-20150506		0945							X										Vial 81
* FBPCR4-20150506		0945								X									Vial 82
* FBPCR5-20150506		0945								X									Vial 83
* FBPCR6-20150506	↓	0945	↓	↓	↓	↓	↓	↓		X									Vial 84
																			Contact: mgrover@ environcorp.com
* Vista WO # 1500415																			
TOTAL	X	X	X																

RELINQUISHED BY: TIME/DATE: 1000 5/6/15

RECEIVED BY: (COMPANY): Vista FedEx Express TIME/DATE: 05/07/15 1038

RELINQUISHED BY: TIME/DATE:

RECEIVED BY: (COMPANY): TIME/DATE:

RELINQUISHED BY: TIME/DATE:

RECEIVED BY: (COMPANY): TIME/DATE:

TURNAROUND TIME (CIRCLE ONE): SAME DAY, 24 HOURS, 48 HOURS, 72 HOURS, 5 DAYS, (NORMAL)

SAMPLE INTEGRITY — INTACT: Y N Temp____

IF SEALED, SEAL INTEGRITY — INTACT: Y N

O = OTHER; NO = NONE; U = UNKNOWN; S = H_2SO_4; N = HNO_3; H = HCL;

FILE: LOG FORMS\Chain [illegible]

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1500414 **TAT** Std

Samples Arrival:	**Date/Time** 05/07/15 1012	**Initials:** YBB	**Location:** Wa 2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 05/07/15 1322	**Initials:** BSB	**Location:** R1 **Shelf/Rack:** NA

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice	None	

Temp °C: 1.4 (uncorrected)	**Time:** 1037	**Thermometer ID:** IR-1	
Temp °C: 1.5 (corrected)			

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7806 1415 1106	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?		COC	Sample Container	(None)	
Shipping Container	Vista	(Client)	Retain	Return	Dispose

Comments:

Sample Login 11/2013 ckt

May 28, 2015

Vista Project I.D.: 1500415

Dr. David Moore
Environ
18100 Von Karman Ave. Suite 600
Irvine, CA 92612

Dear Dr. Moore,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on May 07, 2015. This sample set was analyzed on a standard turn-around time, under your Project Name 'POLA/POLB LDL Phase 2'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier
Laboratory Director

Vista Work Order No. 1500415
Case Narrative

Sample Condition on Receipt:

Eight SPME fibers were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The four samples designated for analysis by EPA Method 1668A were assigned to Vista Work Order #1500414.

Analytical Notes:

Upon receipt, each vial was weighed and hexane was added to each vial, covering the SPME. A table containing the initial and final weights is included with the datasheets.

Analytical Notes:

EPA Method 1699

These samples were extracted and analyzed for the DDX list of chlorinated pesticides by EPA Method 1699 using a ZB-50 GC column. The concentrations of the PRCs are listed following the results for 4,4'-DDMU on each datasheet. The PRCs were not added to the Method Blank or OPR.

Holding Times

The samples were extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected above the sample quantitation limit in the Method Blank. The OPR recoveries were within the method acceptance criteria.

The recoveries of the internal standards 13C12-4,4'-DDD and 13C12-4,4'-DDT were above the acceptance criteria in sample "FB PCR6-20150506". All other labeled standard recoveries for the QC and field samples were within method acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1500415-01	FB-20150506	Vial 78	06-May-15 09:30	07-May-15 10:12	Amber VOA Vial, 60mL
1500415-02	FB PCR4-20150506	Vial 82	06-May-15 09:45	07-May-15 10:12	Amber VOA Vial, 60mL
1500415-03	FB PCR5-20150506	Vial 83	06-May-15 09:45	07-May-15 10:12	Amber VOA Vial, 60mL
1500415-04	FB PCR6-20150506	Vial 84	06-May-15 09:45	07-May-15 10:12	Amber VOA Vial, 60mL

Vista Project: 1500415

ANALYTICAL RESULTS

Sample ID: Method Blank — EPA Method 1699

Matrix: SPME

QC Batch: B5E0049
Date Extracted: 13-May-2015 8:11

Lab Sample: B5E0049-BLK1
Date Analyzed: 21-May-15 00:28 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	6.01		
4,4'-DDE	ND	7.75		
2,4'-DDD	ND	6.79		
2,4'-DDT	ND	13.4		
4,4'-DDD	ND	9.42		
4,4'-DDT	ND	13.4		
4,4'-DDMU	ND	86.7		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	88.0	47 - 160	
IS	13C12-4,4'-DDE	91.4	47 - 160	
IS	13C12-2,4'-DDD	92.2	5 - 199	
IS	13C12-4,4'-DDD	81.6	5 - 120	
IS	13C12-4,4'-DDT	80.7	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: OPR

EPA Method 1699

Matrix: SPME

QC Batch: B5E0049
Date Extracted: 13-May-2015 8:11

Lab Sample: B5E0049-BS1
Date Analyzed: 20-May-15 21:56 Column: ZB-50 Analyst: ANP

Analyte	Amt Found (pg/Sam	Spike Amt	%R	Limits
2,4'-DDE	2090	2000	104	24 - 123
4,4'-DDE	2100	2000	105	50 - 120
2,4'-DDD	2130	2000	106	50 - 120
2,4'-DDT	2330	2000	117	50 - 120
4,4'-DDD	2140	2000	107	42 - 120
4,4'-DDT	2150	2000	107	50 - 120
4,4'-DDMU	20200	20000	101	50 - 120

	Labeled Standard	%R	LCL-UCL
IS	13C12-2,4'-DDE	107	26 - 169
IS	13C12-4,4'-DDE	109	26 - 169
IS	13C12-2,4'-DDD	110	14 - 200
IS	13C12-4,4'-DDD	109	14 - 200
IS	13C12-4,4'-DDT	109	13 - 200

LCL-UCL - Lower control limit - upper control limit

Sample ID: FB-20150506

EPA Method 1699

Client Data

Name: Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:30

Sample Data

Matrix: SPME

Laboratory Data

Lab Sample: 1500415-01 Date Received: 07-May-2015 10:12
QC Batch: B5E0049 Date Extracted: 13-May-2015 8:11
Date Analyzed: 21-May-15 01:19 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	4.49		
4,4'-DDE	ND	5.41		
2,4'-DDD	ND	7.43		
2,4'-DDT	ND	11.3		
4,4'-DDD	ND	7.97		
4,4'-DDT	ND	11.3		
4,4'-DDMU	ND	64.8		
d8-4,4'-DDD	ND	6.67		
d8-4,4'-DDT	ND	11.7		
d8-2,4'-DDE	ND	9.93		
d8-4,4'-DDE	ND	13.0		

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	76.8	47 - 160	
IS	13C12-4,4'-DDE	82.6	47 - 160	
IS	13C12-2,4'-DDD	91.0	5 - 199	
IS	13C12-4,4'-DDD	90.2	5 - 120	
IS	13C12-4,4'-DDT	97.5	5 - 120	

DL - Sample specifc estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

Sample ID: FB PCR4-20150506 — EPA Method 1699

Client Data
Name: Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500415-02 Date Received: 07-May-2015 10:12
QC Batch: B5E0049 Date Extracted: 13-May-2015 8:11
Date Analyzed: 21-May-15 02:10 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	6.16		
4,4'-DDE	ND	8.21		
2,4'-DDD	ND	9.63		
2,4'-DDT	ND	15.0		
4,4'-DDD	ND	10.6		
4,4'-DDT	ND	15.8		
4,4'-DDMU	ND	88.9		
d8-4,4'-DDD	10700			
d8-4,4'-DDT	11500			
d8-2,4'-DDE	10200			
d8-4,4'-DDE	8840			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	80.5	47 - 160	
IS	13C12-4,4'-DDE	83.2	47 - 160	
IS	13C12-2,4'-DDD	78.6	5 - 199	
IS	13C12-4,4'-DDD	82.8	5 - 120	
IS	13C12-4,4'-DDT	85.9	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: FB PCR5-20150506

EPA Method 1699

Client Data
Name: Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500415-03 Date Received: 07-May-2015 10:12
QC Batch: B5E0049 Date Extracted: 13-May-2015 8:11
Date Analyzed: 21-May-15 03:00 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	5.36		
4,4'-DDE	ND	7.29		
2,4'-DDD	ND	9.18		
2,4'-DDT	ND	12.1		
4,4'-DDD	ND	8.53		
4,4'-DDT	ND	14.1		
4,4'-DDMU	ND	77.3		
d8-4,4'-DDD	11800			
d8-4,4'-DDT	11800			
d8-2,4'-DDE	11600			
d8-4,4'-DDE	10000			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	91.7	47 - 160	
IS	13C12-4,4'-DDE	87.9	47 - 160	
IS	13C12-2,4'-DDD	90.1	5 - 199	
IS	13C12-4,4'-DDD	96.1	5 - 120	
IS	13C12-4,4'-DDT	92.9	5 - 120	

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Sample ID: FB PCR6-20150506 — EPA Method 1699

Client Data
Name: Environ
Project: POLA/POLB LDL Phase 2
Date Collected: 06-May-2015 9:45

Sample Data
Matrix: SPME

Laboratory Data
Lab Sample: 1500415-04 Date Received: 07-May-2015 10:12
QC Batch: B5E0049 Date Extracted: 13-May-2015 8:11
Date Analyzed: 21-May-15 03:51 Column: ZB-50 Analyst: ANP

Analyte	Conc. (pg/Sample)	DL	EMPC	Qualifiers
2,4'-DDE	ND	5.01		
4,4'-DDE	ND	6.45		
2,4'-DDD	ND	7.56		
2,4'-DDT	ND	11.4		
4,4'-DDD	10.7			J
4,4'-DDT	ND	12.2		
4,4'-DDMU	ND	72.3		
d8-4,4'-DDD	16900			
d8-4,4'-DDT	20800			
d8-2,4'-DDE	15400			
d8-4,4'-DDE	15800			

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C12-2,4'-DDE	118	47 - 160	
IS	13C12-4,4'-DDE	132	47 - 160	
IS	13C12-2,4'-DDD	129	5 - 199	
IS	13C12-4,4'-DDD	139	5 - 120	H
IS	13C12-4,4'-DDT	150	5 - 120	H

DL - Sample specifc estimated detection limit
EMPC - Estimated maximum possible concentration
LCL-UCL - Lower control limit - upper control limit

Vial Masses

Vial Number	Lab ID	Initial Mass (g)	Final Mass (g)	Hexane Volume (mL)
78	1500415-01	36.9471	40.7932	60
82	1500415-02	37.0905	37.7508	60
83	1500415-03	37.2475	37.9057	60
84	1500415-04	36.4681	37.1253	60

Please note that the final masses include additional vial labels. Approximate label mass is 0.2677g.

DATA QUALIFIERS & ABBREVIATIONS

B	**This compound was also detected in the method blank.**
D	**Dilution**
E	**The associated compound concentration exceeded the calibration range of the instrument.**
H	**Recovery and/or RPD was outside laboratory acceptance limits.**
I	**Chemical Interference**
J	**The amount detected is below the Lower Calibration Limit of the instrument.**
*****	**See Cover Letter**
Conc.	**Concentration**
DL	**Sample-specific estimated detection limit**
MDL	**The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.**
EMPC	**Estimated Maximum Possible Concentration**
NA	**Not applicable**
RL	**Reporting Limit – concentrations that correspond to low calibration point**
ND	**Not Detected**
TEQ	**Toxic Equivalency**

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Michigan Department of Natural Resources	9932
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
North Carolina Department of Health & Human Services	06700
Oregon Laboratory Accreditation Program	4042-003
Pennsylvania Department of Environmental Protection	011
South Carolina Department of Health	87002001
Tennessee Department of Environment & Conservation	TN02996
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	3138
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

ENVIRON

CHAIN-of-CUSTODY

№ 09705

1500415 1.5°C

☒ 18100 Von Karman Ave., Suite 600, Irvine, CA 92612, (949) 261-5151, (949) 261-6202 (fax)

☐ 707 Wilshire Blvd., Suite 4950, Los Angeles, Calif. 90017, (213) 943-6300, (213) 943-6301 (fax)

☐ 1702 E Highland Avenue, Suite 412, Phoenix, AZ 85016, (602) 734-7700, (602) 734-7701 (fax)

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MSA#: _____ WO#: _____

PROJECT NAME / FACILITY ID: POLA/POLB LDL Phase 2

FIELD PERSON: J Arblaster

PROJECT NUMBER: 04 33310A11 DATE: May 6 2015

PROJECT MANAGER: D. Moore

PROJECT LOCATION: San Pedro / Long Beach

LABORATORY: Vista

IS THIS A UST PROJECT OR IS EDF REQUIRED? Y (N) IF YES, GLOBAL ID #: _____

SAMPLER: J. Arblaster

SIGNATURE:

	SAMPLE I.D. NUMBER	SAMPLE DATE (YEAR 2015)	SAMPLE TIME	SAMPLE DEPTH (ft)	AIR SAMPLE VOLUME (L)	MATRIX (A) AIR (S) SOIL (G) GAS (W) WATER	NUMBER OF CONTAINERS	FILTERED/UNFILTERED (F/U)	PRESERVATION (SEE KEY)	ANALYSIS REQUIRED: PCM PCB + PCRS EPA 1668A	DDX + PCRS EPA 1699	COMMENTS
*	FB-20150506	5/6	0930	—	—	SPME	1	—	—	X		Vial 77
	FB-20150506	↓	0930	↓	↓	↓	↓	↓	↓		X	Vial 78
*	FBPCR1-20150506		0945							X		Vial 79
*	FBPCR2-20150506		0945							X		Vial 80
*	FBPCR3-20150506		0945							X		Vial 81
	FBPCR4-20150506		0945								X	Vial 82
	FBPCR5-20150506		0945								X	Vial 83
	FBPCR6-20150506	↓	0945	↓	↓	↓	↓	↓	↓		X	Vial 84
												Contact: mgrover@environcorp.com
*	Vista Work Order 1500414											
	TOTAL	X	X	X								

RELINQUISHED BY: [signature]	TIME/DATE: 1000 5/6/15	RECEIVED BY:	TIME/DATE: 5/07/15
		(COMPANY): Vista	Bell Beaudet 1038
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
		(COMPANY):	
RELINQUISHED BY:	TIME/DATE:	RECEIVED BY:	TIME/DATE:
		(COMPANY):	

TURNAROUND TIME (CIRCLE ONE): SAME DAY, 24 HOURS, 48 HOURS, 72 HOURS, 5 DAYS, NORMAL

SAMPLE INTEGRITY — INTACT: Y N Temp_____

IF SEALED, SEAL INTEGRITY — INTACT: Y N

O = OTHER; NO = NONE; U = UNKNOWN; S = H_2SO_4; N = HNO_3; H = HCL;

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1500415 TAT Std

Samples Arrival:	**Date/Time** 05/07/15 1012	**Initials:** [illegible]	**Location:** Wa 2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 05/07/15 1333	**Initials:** [illegible]	**Location:** R1 **Shelf/Rack:** NA

Delivered By:	(FedEx)	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	(Ice)	Blue Ice		Dry Ice		None

Temp °C: 1.4	(uncorrected)	**Time:** 1037	**Thermometer ID:** IR-1
Temp °C: 1.5	(corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill — Trk # 7806 1415 1106	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

$Na_2S_2O_3$ Preservation Documented?	COC	Sample Container	(None)	
Shipping Container: Vista	(Client)	Retain	Return	Dispose

Comments:

Sample Login 11.2013 ckt

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WORK ORDER NUMBER: 15-05-0305

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weston Solutions

Client Project Name: POLB/POLA Low Detection Limit Water Column Study Ph.2

Attention: Sheila Holt
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Approved for release on 05/13/2015 by:
Danielle Gonsman
Project Manager

ResultLink

Email your PM

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Contents

Client Project Name: POLB/POLA Low Detection Limit Water Column Study Ph.2
Work Order Number: 15-05-0305

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Work Order Narrative

Work Order: 15-05-0305 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/06/15. They were assigned to Work Order 15-05-0305.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	Weston Solutions 5817 Dryden Place, Suite 101 Carlsbad, CA 92008-9999	Work Order:	15-05-0305
		Project Name:	POLB/POLA Low Detection Limit Water Column Study Ph.2
		PO Number:	
		Date/Time Received:	05/06/15 10:45
		Number of Containers:	8
Attn:	Sheila Holt		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CP-RW-01-G-M-20150506	15-05-0305-1	05/06/15 07:30	4	Sea Water
FH-RW-01-G-M-20150506	15-05-0305-2	05/06/15 08:15	4	Sea Water

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Analytical Report

Weston Solutions
5817 Dryden Place, Suite 101
Carlsbad, CA 92008-9999

Date Received: 05/06/15
Work Order: 15-05-0305
Preparation: N/A
Method: SM 2540 D
Units: mg/L

Project: POLB/POLA Low Detection Limit Water Column Study Ph.2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CP-RW-01-G-M-20150506	**15-05-0305-1-B**	**05/06/15 07:30**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	3.7	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FH-RW-01-G-M-20150506	**15-05-0305-2-B**	**05/06/15 08:15**	**Sea Water**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-09-010-7161**	**N/A**	**Aqueous**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Sample Duplicate

Weston Solutions		Date Received:	05/06/15
5817 Dryden Place, Suite 101		Work Order:	15-05-0305
Carlsbad, CA 92008-9999		Preparation:	N/A
		Method:	SM 2540 D
Project: POLB/POLA Low Detection Limit Water Column Study Ph.2			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
15-05-0264-6	**Sample**	**Sea Water**	**N/A**	**05/06/15 00:00**	**05/06/15 20:00**	**F0506TSSD2**
15-05-0264-6	**Sample Duplicate**	**Sea Water**	**N/A**	**05/06/15 00:00**	**05/06/15 20:00**	**F0506TSSD2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total Suspended	ND	ND	N/A	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Weston Solutions	Date Received: 05/06/15
5817 Dryden Place, Suite 101	Work Order: 15-05-0305
Carlsbad, CA 92008-9999	Preparation: N/A
	Method: SM 2540 D
Project: POLB/POLA Low Detection Limit Water Column Study Ph.2	Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-010-7161	**LCS**	**Aqueous**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**
099-09-010-7161	**LCSD**	**Aqueous**	**N/A**	**05/06/15**	**05/06/15 20:00**	**F0506TSSL2**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Solids, Total Suspended	100.0	100.0	100	104.0	104	80-120	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 15-05-0305 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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CHAIN OF CUSTODY

37109

☒ 5817 Dryden Place, Ste 101 • Carlsbad, CA 92008 • (760) 795-6900, FAX 931-1580
☐ 1340 Treat Blvd, Ste 210 • Walnut Creek, CA 94597 • (925) 948-2600, FAX 948-2601

DATE 6 MAY 2015 PAGE 1 OF 1

PROJECT NAME / SURVEY / PROJECT NUMBER: POLB/POLA Low Detection Limit Water Column Study Phase 2
PROJECT MANAGER / CONTACT: Sheila Holt
CLIENT: Weston Solutions
ADDRESS: See Above
PHONE / FAX / EMAIL:

FOR WESTON USE ONLY: 15-05-0305

SITE ID (Location)	SAMPLE ID	DATE	TIME	MATRIX	CONTAINER TYPE / VOLUME	TOTAL NUMBER OF CONTAINER	ANALYSIS/TEST REQUESTED: TOC	DOC	POC	TSS	PRESERVED HOW	SAMPLE TEMP. (°C) UPON RECEIPT	WESTON LAB ID
	CP-RW-01-G-M-20150506	6May15	0930	SLT	plastic various	4	X	X	X	X	ice/H2SO4		1
	FH-RW-01-G-M-20150506	"	0815	"	"	4	X	X	X	X	"		2

Sample Matrix Codes: FW= fresh water GW=ground water SLT=salt water SW=storm water WW=waste water SED=sediment A=air BIO=biologic SS=soil T=tissue O=other (specify) _____

Container Code: G=glass P=plastic B=bags ☐ O=other _____

Shipped By: ☐ Courier ☐ UPS ☐ FedEx ☐ USPS ☐ Client drop off ☐ Other _____

Turnaround Time: ☐ 2-day ☐ 5-day ☐ 7-day ☐ 10-day ☐ 14-day ☐ Standard ☐ Other _____

Reporting Requirements: ☐ PDF ☐ EDD ☐ Hard Copy ☐ Email ☐ Other _____

SAMPLED BY: PRINT: Damon Owen / Nick Cochran, Jennifer Arblaster SIGNATURE: Nick Cochran

COMMENTS / SPECIAL INSTRUCTIONS: DOC to be filtered @ Eurofins + shipped to MSI.

RELINQUISHED BY

	Print Name	Signature	Firm	Date/Time
1.	Nick Cochran	Nick Cochran	Weston	5/6/15 1045
2.				
3.				
4.				
5.				
6.				

RECEIVED BY

Print Name	Signature	Firm	Date/Time
PEGGY SORIANO	Peggy Soriano	ESI	5/6/15 1045

WHITE – return to originator • YELLOW – lab • PINK – retained by originator

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Table 6. Laboratory Quality Assurance/Quality Control Analysis Summary
Ports of Los Angeles and Long Beach
San Pedro and Long Beach, California

Analysis Type	Initial Calibration [1,2]	Continuing Calibration Verification	LCS or SRM [3]	Replicates	Matrix Spikes	Matrix Spike Duplicates	Method Blanks	Surrogate Spikes	Internal Standard
Total solids	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
Particle size	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
TSS	Daily or each batch	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
TOC/DOC	As needed	1 per 10 analytical runs	1 per 20 samples or 1 per batch	NA	1 per 20 samples or 1 per batch	1 per 20 samples or 1 per batch	Each batch	NA	NA
POC	Daily or each batch	1 per 16 samples	1 per 20 samples	1 per 20 samples	NA	NA	Each batch	NA	NA
PCB congeners by high-resolution method	As needed	Every 12 hours	1 per 20 samples	NA	NA4	NA4	1 per 20 samples	NA [4]	Every sample
Organochlorine pesticides by high-resolution method	As needed	Every 12 hours	1 per 20 samples	NA	NA4	NA4	1 per 20 samples	NA [4]	Every sample

Notes:
1.) For physical tests, calibration and certification of drying ovens and weighing scales are conducted annually.
2.) Calibrations should be conducted per analytical methods or instrument manufacturers specifications.
3.) When SRM is not available, a LCS will be analyzed.
4.) Isotope dilution quantitation technique accounts for matrix interferences; thus, matrix spike/matrix spike duplicate are not required.
5.) Values should have relative percent differences less than 40 percent or they are P flagged. ICALS = 20 percent or less and CCALS = 15 percent or less.
6.) Abbreviations:

DOC = dissolved organic carbon
LCS = Laboratory control sample
NA = not applicable
PCB = polychlorinated biphenyl
POC = particulate organic carbon
SRM = standard reference material
TOC = total organic carbon
TSS = total suspended solids

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WORK ORDER NUMBER: 15-05- 0305

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weston Sol.

DATE: 05 / 06 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.3°C); Temperature (w/o CF): 3 - 4 °C (w/ CF): 3 - 1 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: SM

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: SM

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: SM

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☑ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☑ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☑ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: SM

Reviewed by: SM

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APPENDIX D
DATA VALIDATION REPORT

RAMBOLL

ENVIRONMENT
& HEALTH

Port of Los Angeles
San Pedro, California

Port of Long Beach
Long Beach, California

VALIDATION OF ANALYTICAL DATA FROM VISTA ANALYTICAL LABORATORY, EUROFINS CALSCIENCE, INC. AND MARINE SCIENCES INSTITUTE FOR LOW DETECTION LIMIT WATER COLUMN STUDY PHASE 2 EVENT 2

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Ramboll Environ
3000 South Berry Road
Suite 150
Norman, OK 73072
USA

T +1 405 801 6020
www.ramboll-environ.com

Ramboll Environ US Corporation (Ramboll Environ), formerly ENVIRON International US Corporation, reviewed analytical data for solid phase microextraction (SPME) fibers and sea water samples collected from the Los Angeles and Long Beach Harbor waters and Eastern San Pablo Bay. This data validation summery presents the results of the data review and validation process for samples collected during May and June 2015. The following samples and matrices were evaluated as part of this review:

Sea water

- REF-RW-01-G-M-20150505
- SP-RW-01-G-M-20150505
- LARE-RW-01-G-M-20150505
- OB-RW-01-G-M-20150505
- OB-RW-01-G-B-20150505
- IB-RW-01-G-M-20150505
- IB-RW-01-G-B-20150505
- IB-RW-1001-G-M-20150505
- CS-RW-01-G-M-20150505
- CS-RW-01-G-B-20150505
- IA-RW-01-G-M-20150505
- EB-20150505
- CP-RW-01-G-M-20150506
- FH-RW-01-G-M-20150506
- Filter Blank
- REF-RW-01-G-M-20150615
- SP-RW-01-G-M-20150615

- LARE-RW-01-G-M-20150615
- OB-RW-01-G-M-20150615
- OB-RW-01-G-B-20150615
- IB-RW-01-G-M-20150615
- IB-RW-01-G-B-20150615
- IB-RW-1001-G-M-20150615
- CS-RW-01-G-M-20150615
- CS-RW-01-G-B-20150615
- IA-RW-01-G-M-20150615
- FH-RW-01-G-M-20150615
- CP-RW-01-G-M-20150615
- EB-20150615

SPME Fiber

- FB-20150506
- FB PRC1-20150506
- FB PRC2-20150506
- FB PRC3-20150506
- FB PRC4-20150506
- FB PRC5-20150506
- FB PRC6-20150506
- CP-RW-01-S-M-20150615
- REF-RW-01-S-M-20150615
- OB-RW-01-S-M-20150615
- OB-RW-01-S-B-20150615
- SP-RW-01-S-M-20150615
- LARE-RW-01-S-M-20150615
- IB-RW-01-S-M-20150615
- IB-RW-1001-S-M-20150615
- IB-RW-01-S-B-20150615
- IA-RW-01-S-M-20150615
- CS-RW-01-S-M-20150616
- CS-RW-01-S-B-20150616
- FH-RW-01-S-M-20150616

Eurofins Calscience (Eurofins), located in Garden Grove, California analyzed the sea water samples for total suspended solids (TSS) by Standard Method (SM) 2540D. Eurofins reported the results in data packages: 15-05-0264, 15-05-0305, and 15-06-1223.

Marine Sciences Institute Analytical Laboratory (MSI), located at the University of California in Santa Barbara, California (UCSB), analyzed the sea water samples for the following analyses:

- Particulate Organic Carbon (POC) based on Unites States Environmental Protection Agency (EPA) Method 440

- Dissolved Organic Carbon (DOC) and Total Organic Carbon (TOC) by Carlson Lab UCSB Standard Operating Procedure for DOC Analyses for sea water samples; samples analyzed for DOC were filtered by Eurofins prior to analysis by MSI. TOC was analyzed by the same method, but samples were not filtered.

Vista Analytical Laboratory (Vista), located in El Dorado Hills, California, performed the analyses of the SPME fibers. The samples were analyzed for the following analyses:

- Polychlorinated biphenyls (PCB) 209 congeners by EPA Method 1668C
- Dichlorodiphenyltrichloroethane and its derivatives (DDXs) by EPA Method 1699

Vista reported the results in data packages: 1500414, 1500415, 1500539, 1500540, 1500544, and 1500545.

The data were evaluated in general conformance of project objectives specified in the *Supplemental Sampling and Analysis Plan for Low Detection Limit Water Column Study Phase 2* (ENVIRON in association with Weston 2014) [SAP] and *Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics Total Maximum Daily Load* (Anchor QEA, LLC 2014) [QAPP].

Ramboll Environ's validation review of Eurofins data was based on procedures published by the EPA Contract Laboratory Program in their National Functional Guidelines for both organic and inorganic data review (USEPA 2014). The guidelines provide the criteria to review laboratory and field quality control information and apply the appropriate data qualifiers to the laboratory data. The Quality Control (QC) information checked by Ramboll Environ included case narratives, chain-of-custody (COC) forms, holding times, reporting limits, blank spikes, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) samples, laboratory duplicates, and blanks. All samples were analyzed within recommended holding times.

Because MSI is an academic laboratory and not a commercial laboratory, its report was different than the report format usually produced by commercial environmental laboratories. The MSI report consisted of a summary of results, check standards, and instrument blanks. A case narrative, dilution factors, laboratory control spike results, method blank results, sample receipt documentation were not submitted with the MSI data and were not evaluated as part of review for this data set.

Two sets of project-specific field duplicate samples, IB-RW-01-G-M-20150505/IB-RW-1001-G-M-20150505 and IB-RW-01-G-M-20150615/IB-RW-1001-G-M-20150615 were collected as part of this data set.

One equipment blank, EB-20150505 and one filter blank were collected as part of this data set. The equipment blanks were analyzed for TSS, POC, DOC, and TOC.

Two field blanks and six field blanks spiked with performance reference compounds (PRCs) were collected as part of this data set. The PRC field blanks analyzed for PCBs were spiked with Carbon-13 labeled PCB congeners: 13C-PCB-8, 13C-PCB-31, 13C-PCB-79, 13C-PCB-133, and 13C-PCB-178. The PRC list varied slightly from the sampling plan due to conflicts with the laboratory's internal standard list. The PRC field blanks analyzed for DDXs were spiked with d8-4,4'-DDD, d8-4,4'-DDT, d8-2,4'-DDE, and d8-4,4'-DDE.

The following sections summarize the findings for each analysis based on the review.

TSS (Eurofins)

All laboratory quality control criteria were met for samples analyzed for TSS. Two sets of field duplicate pairs were analyzed for TSS. The relative percent difference (RPD) for field duplicate results was not calculated for field duplicate pair IB-RW-01-G-M-2015-20150505/IB-RW-1001-G-M-20150505 because TSS was not detected in both samples above the laboratory reporting limit. The RPD for field duplicate pair IB-RW-01-G-B-20150615 and IB-RW-1001-G-M-20150615 was above 25%. The results are qualified "J" as estimated because the precision goal specified in the SAP was not met.

POC (MSI)

POC was detected in filter blanks analyzed for POC with the samples collected on May 5 and May 6, 2015 and with samples collected on June 15, 2015. The concentrations were compared to results reported for the field samples. Results for POC in samples CS-RW-01-G-B-20150615 and CP-RW-01-G-M-20150615, and in equipment blanks EB-20150505 and EB-20150615 were within five times the concentration detected in the filter blanks. These results may be biased due to laboratory contamination and are qualified "J" as estimated.

Field duplicate RPDs for IB-RW-01-G-M-20150505 and IB-RW-1001-G-M-20150505 were within 25%. The RPD for field duplicate pair IB-RW-01-G-M-20150615 and IB-RW-1001-G-M-20150615 was 75%, which exceeds the precision goal of 25% in the SAP. The results are qualified "J" as estimated because the precision goal was not met.

TOC and DOC (MSI)

DOC was detected in the filter blanks analyzed with the samples collected on May 5 and May 6, 2015 and with samples collected on June 15, 2015. The concentrations were compared to results reported for the field samples. The DOC result for EB-20150615 is qualified "J" because the concentration was within five times the amount detected in the filter blank. TOC was also detected in EB-20150615. The results for DOC and TOC were compared to the results detected in the equipment blanks. All of the TOC results for samples collected on June 15, 2015 were within five times the concentration detected in equipment blank EB20150615, with the exception of sample LARE-RW-01-G-M-20150615. Results within five times the concentration in the equipment blank may be biased due to sampling collection and/or analysis and the results are qualified "J" as estimated.

Two project-specific MS/MSDs were prepared from samples IB-RW-01-G-M-20150505 and IB-RW-01-G-M-20150615. Eurofins spiked the samples with 5,000 micrograms per liter (µg/L) carbon before transferring the sample to MSI for analysis. The MS/MSD recoveries were within the control limits of 80-120% with two exceptions. The percent recovery for DOC in the MS for IB-RW-01-G-M-20150615 was 17%. The concentration in the MS that was recovered for DOC was 1046.61 µg/L, which is almost the same concentration of 1039.08 µg/L for DOC reported in the unspiked sample. Therefore, it was determined a spike error may have occurred with the preparation of the MS, and the results was not used to assess matrix interference. The MSD recovery for TOC in the MSD prepared from sample IB-RW-01-G-M-

20150615 was 79%, just below the accuracy goal of 80% specified in the SAP. No data is qualified because the MS recovery was within the goal for accuracy and the MS/MSD RPD was within the goal for precision of 25%.

RPDs for both field duplicate pairs, IB-RW-01-G-M-20150505/IB-RW-1001-G-M-20150505 and IB-RW-01-G-M-20150615/IB-RW-1001-G-M-20150615 were within 25%.

PCBs (Vista)

The laboratory case narratives indicated that initial and continuing calibration verifications met the method acceptance criteria. Labeled standard recoveries were reviewed, and recoveries were within method acceptance criteria for all QC and field samples. The Ongoing Precision and Recovery (OPR) sample recoveries were within the method acceptance criteria.

Method blanks were evaluated for detections. Nineteen PCB congeners were detected above the sample quantitation limit in the method blank associated with the field blanks reported in Vista Report 1500414. Twelve PCB congeners were detected in the method blank below the lower calibration limit of the instrument and were "J" flagged as estimated by the laboratory. The detections in the method blank were compared to the associated field blank samples FB-20150506, FB PRC1-20150506, FB PRC2-20150506, and FB PRC3-20150506. PCB congeners that were detected within five times the concentration in the method blank are qualified "J" as estimated due to potential laboratory contamination. PCB-47 was detected in the method blank associated with SPME samples collected in June and reported in Vista reports 1500539 and 1500544. The concentration was below the lower calibration limit of the instrument and flagged "J" as estimated by the laboratory. The concentration of PCB-47 detected in associated samples was above five times the amount in the method blank; therefore, no date were qualified.

Field blanks were evaluated for detections. The following congeners were detected in one or more field blank and were not determined to be biased due to associated method blank contamination: PCB-1, PCB-2, PCB-4/10, PCB-6, PCB-7/9, PCB-19, PCB-24/27, PCB-40, PCB-42/59, PCB-46, PCB-48/75, PCB-51, PCB-88/91, PCB-99, PCB-105, PCB-136, PCB-138/163/164, PCB-141, PCB-146/165, PCB-179, PCB-180, PCB-182/187, PCB-183, PCB-194, PCB-196/203, PCB-199, and PCB-202. Results that were below the laboratory's lowest calibration point were flagged "J" as estimated by the laboratory. The concentrations were compared to results reported for the field samples reported in laboratory reports 1500539 and 1500544. Any results within five times the detections in the field blank are qualified "J" as estimated and may be biased due to contamination present during processing, sampling, and/or transport of the samples. Results that were greater than five times were determined not to be impacted by potential sources of contamination and those data are not qualified.

One field duplicate pair, IB-RW-01-S-M-20150615 and IB-RW-1001-S-M-20150615, was analyzed for DDX compounds. The RPDs between compounds with concentrations above the detection limits were within 25%, with one exception. The RPD for PCB-206 was 38%. Precision goals for SPME fibers were not specified in the SAP and the results are not qualified.

The laboratory reported some congener results that did not meet the method ion abundance ratio criteria with estimated maximum possible concentrations (EMPCs). These results are considered estimated and are qualified "J".

DDX (Vista)

The laboratory case narratives indicated that initial and continuing calibration verifications met the method acceptance criteria. Labeled standard recoveries were reviewed, and recoveries were within method acceptance criteria for all QC and field samples with two exceptions. The recoveries for internal standards 13C12-4,4'-DDD and 13C12-4,4'-DDT were above the acceptance criteria in sample FB PRC6-20150506. 4,4'-DDD was the only compound detected in the sample and may be biased high due to the associated internal standard recovery. The result was already "J" flagged by the laboratory because the detection was below the lower calibration limit of the instrument and is considered estimated. No additional qualifier is applied to the result. The OPR sample recoveries were within the method acceptance criteria for all OPRs associated with samples in this data set.

Method and field blanks were evaluated for detections. No target analytes were detected in any method blanks. 4,4'-DDD was the only compound detected in a field blank (FB PRC6-20150506). However, the result is qualified "J" as estimated; therefore, the result was not used to compare to detections in associated field samples.

One field duplicate pair, IB-RW-01-S-M-20150615 and IB-RW-1001-S-M-20150615, was analyzed for DDX compounds. The RPDs between results for all concentrations above the detection limits were within 25%.

Summary

Based on Ramboll Environ's evaluation, the analytical data included in this data set are usable as qualified. Data evaluated for this report were qualified for method blank contamination, field blank contamination, field duplicate precision, results reported with EMPC values, and when concentrations were detected below the laboratory calibration limit.

References

Anchor QEA, LLC. 2014. *Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics Total Maximum Daily Load*. Prepared for Port of Long Beach and Port of Los Angeles. August.

Carlson, Craig. Standard Operating Procedure for DOC analyses - Carlson Lab UCSB

ENVIRON International Corporation in association with Weston Solutions, Inc. 2014. *Supplemental Sampling and Analysis Plan for Low Detection Limit Water Column Study Phase 2.* Prepared for Port of Los Angeles and Port of Long Beach. December.

USEPA 2014. National Functional Guidelines for Superfund Organic Methods Data Review. OSWER 9355.0-132. EPA-540-R-014-002. August.

USEPA 2014. National Functional Guidelines for Inorganic Superfund Data Review. OSWER 9335.0-131. EPA-540-R-013-001. August.

April 3, 2015

Port of Los Angeles
San Pedro, California

Port of Long Beach
Long Beach, California

Re: Validation of Analytical Laboratory Data from Eurofins Calscience, Inc. and Marine Sciences Institute for Low Detection Limit Water Column Study Phase 2 Event 1

ENVIRON International Corporation (ENVIRON) reviewed analytical data for sea water samples collected from the Los Angeles and Long Beach Harbor waters and Eastern San Pedro Bay. This data validation summary presents the results of the data review and validation process for samples collected on December 9 and 10, 2014 and January 8, 2015. Solid Phase Microextraction results were validated in *Validation of Analytical Laboratory Data from Eurofins CalScience, Inc. and Vista Analytical Laboratory for Low Detection Limit Water Column Study Event 1* dated March 9, 2015 (ENVIRON, 2015). Seawater sample results received up to March 9, 2015 were included in this validation report and have also been included in this report for completeness; however, no changes in the validation determination were made for these samples. The following samples/matrices were evaluated as part of this review: The following sea water samples were evaluated as part of this review:

- REF-RW-01-G-M-20141209
- OB-RW-01-G-M-20141209
- OB-RW-01-G-B-20141209
- SP-RW-01-G-M-20141209
- LARE-RW-01-G-M-20141209
- EB-20141209
- CP-RW-01-G-M-20141210
- FH-RW-01-G-M-20141210
- IA-RW-01-G-M-20141210
- CS-RW-01-G-M-20141210
- CS-RW-01-G-B-20141210
- IB-RW-01-G-M-20141210

- IB-RW-01-G-B-20141210
- IB-RW-1001-G-M-20141210
- CP-RW-01-G-M-20150108
- REF-RW-01-G-M-20150108
- SP-RW-01-G-M-20150108
- LARE-RW-01-G-M-20150108
- OB-RW-01-G-B-20150108
- OB-RW-01-G-M-20150108
- IB-RW-01-G-B-20150108
- IB-RW-01-G-M-20150108
- IB-RW-1001-G-M-20150108
- CS-RW-01-G-B-20150108
- CS-RW-01-G-M-20150108
- IA-RW-01-G-M-20150108
- FH-RW-01-G-M-20150108
- EB-20150108
- Filter Blank

Eurofins Calscience (Eurofins), located in Garden Grove, California, performed the following analyses:

- Dissolved Organic Carbon (DOC) by Standard Method (SM) 5310 D
- Total Suspended Solids (TSS) by SM 2540 D

Marine Sciences Institute Analytical Laboratory (MSI), located at the University of California in Santa Barbara, California, performed the following analyses:

- Particulate Organic Matter (POC) based on United States Environmental Protection Agency (USEPA) Method 440 for SPME fibers

- DOC and Total Organic Carbon (TOC) by Carlson Lab UCSB Standard Operating Procedure for DOC Analyses for sea water samples; samples analyzed for DOC were filtered by Eurofins prior to analysis by MSI

The sample results were reported in Eurofins reports 14-12-0896, 14-12-1034, and 15-01-0408. Sample results for DOC and TSS analyzed by Eurofins in laboratory reports 14-12-0896 and 14-12-1034 were previously discussed in the data validation report dated March 9, 2015.

The data were evaluated in general conformance of project objectives specified in the *Supplemental Sampling and Analysis Plan for Low Detection Limit Water Column Study Phase 2* (ENVIRON in association with Weston 2014) and *Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics Total Maximum Daily Load* (Anchor QEA, LLC 2014) [QAPP].

ENVIRON's validation review of Eurofins data was based on procedures published by the EPA Contract Laboratory Program in their National Functional Guidelines for both organic and inorganic data review (USEPA 2014). The guidelines provide the criteria to review laboratory and field quality control information and apply the appropriate data qualifiers to the laboratory data. The Quality Control (QC) information checked by ENVIRON included case narratives, chain-of-custody (COC) forms, holding times, reporting limits, blank spikes, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) samples, laboratory duplicates, and blanks.

Because MSI is an academic laboratory and not a commercial laboratory, its report was different than the report format usually produced by commercial environmental laboratories. The MSI report consisted of a summary of results, calibration curves for DOC and TOC, check standards for POC, and instrument blanks. A case narrative, reporting limits, dilution factors, laboratory control spike results, method blank results, sample receipt documentation were not submitted with the MSI data and were not evaluated as part of review for this data set.

Two sets of project-specific field duplicate samples (IB-RW-01-G-M-20141210/IB-RW-1001-G-M-20141210) and IB-RW-01-G-M-20150108/IB-RW-1001-G-M-20150108) were collected as part of this data set. The field duplicates were analyzed for TSS by Eurofins. MSI analyzed the field duplicates for POC, DOC, and TOC.

Two equipment blanks, EB-20150108 and EB-20141209, and one filter blank were collected as part of this data set. The equipment blanks were analyzed by POC, DOC, and TOC by MSI prepared by rinsing the equipment prior to use with lab-grade deionized water.

The following sections summarize the findings for each analysis reported by Eurofins and MSI based on the review.

DOC and TSS (Eurofins)

No findings were noted for the data produced by Eurofins for the DOC and TSS analysis. No qualifiers were added based on the review.

POC (MSI)

Two field duplicate pairs were submitted for POC analysis. The calculated relative percent difference (RPD) between field duplicate pairs IB-RW-01-G-M-20141210 and IB-RW-1001-G-M-20141210 was 21%, which is within the precision goal of 25% specified in the QAPP. However, a laboratory duplicate was also performed by MSI for IB-RW-01-G-M-20141210 and the calculated RPD was 98%. The low precision may be due to the analytical process or heterogeneity in the sample matrix. The results for POC in sample IB-RW-01-G-M-20141210 and field duplicate IB-RW-1001-G-M-20141210 were qualified "J" as estimated.

The calculated RPD between field duplicate pairs IB-RW-01-G-M-20150108 and IB-RW-1001-G-M-20150108 was 59%. The results were qualified "J" as estimated because the RPD exceeds the precision goal for field duplicates of 25% specified in the QAPP.

POC was reported at a concentration of 18.5 micrograms per liter (µg/L) in the POC Blank reported with samples collected on December 10, 2014. All associated samples are greater than 5 times the concentration in the POC blank, with the exception of the laboratory duplicate of IB-RW-01-G-M-20141210 and field sample IB-RW-01-G-B-20141210. These results were qualified "J" as estimated due to potential laboratory contamination from the analysis.

Two equipment blanks were analyzed for POC. The equipment blank associated with samples collected on December 9, 2014 had a detection of POC at 20.1 µg/L. The equipment blank associated with samples collected on January 8, 2015 had a detection of 7.61 µg/L. POC was detected in all the associated samples at concentrations greater than five times, with the exception of samples REF-RW-01-G-M-20141209, SP-RW-01-G-M-20141209, CP-RW-01-G-M-20150108, SP-RW-01-G-M-20150108, OB-RW-01-G-B-20150108, OB-RW-01-G-M-20150108, IB-RW-01-G-B-20150108, IB-RW-01-G-M-20150108, IB-RW-1001-G-M-20150108, and CS-RW-01-G-B-20150108. These samples were qualified "J" as estimated because the presence of POC in the associate equipment blanks indicate they may be biased due to field and/or laboratory contamination.

POC was detected in the filter blank submitted with the samples collected on January 8, 2015. MSI reported a result of 6.28 µg/L, which is similar to the concentration reported in the equipment blank for the sample date. The POC results reported for samples CP-RW-01-G-M-20150108, SP-RW-01-G-M-20150108, OB-RW-01-G-B-20150108, OB-RW-01-G-M-20150108, IB-RW-01-G-B-20150108, IB-RW-01-G-M-20150108, IB-RW-1001-G-M-20150108, and CS-RW-01-G-B-20150108 were all within five times the concentration in the filter blank. The results were qualified "J" as estimated.

TOC and DOC (MSI)

All calculated RPDs for field duplicate pairs and laboratory duplicates analyzed for TOC and DOC were within the precision goal of 25% specified in the QAPP. The samples collected on December 10, 2014 were run in replicate by MSI. The replicate concentrations are within 25%.

One project-specific matrix spike/matrix-spike duplicate (MS/MSD) was prepared from sample IB-RW-01-G-M-20141210. Eurofins spiked the sample with 5,000 µg/L dissolved organic carbon before transferring the sample to MSI for analysis for DOC. The MS/MSD recoveries were within the QAPP control limits of 80-120% for accuracy.

TOC and DOC were detected in the equipment and filter blanks between 58.27 and 379.15 µg/L. Sample results were within the range of 932.88 and 1,607.18 µg/L. Sample results were compared

to the concentrations in the associated equipment and filter blanks and any results within five times the concentration in the associated blank were qualified “J” as estimated.

DOC results reported by MSI were split samples analyzed by Eurofins using SM 5310 D. The results reported by MSI were in general an order of magnitude lower than reported by Eurofins. Both laboratories were asked to review the data for dilution factor or calculation errors and none were found. The difference may be due to method differences between the two laboratories or sample matrix, but could not be explained definitively by this data review.

Summary

Based on ENVIRON’s evaluation, the analytical data included in this data set are usable as qualified. Data evaluated for this report were qualified “J” for field duplicate pairs that were above the QAPP control limit of 25% for RPD. Data were also qualified in this data sets for blank results that indicate a potential bias due to contamination.

References

Anchor QEA, LLC. 2014. *Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics Total Maximum Daily Load*. Prepared for Port of Long Beach and Port of Los Angeles. August.

Carlson, Craig. Standard Operating Procedure for DOC analyses - Carlson Lab UCSB

ENVIRON International Corporation in association with Weston Solutions, Inc. 2014. *Supplemental Sampling and Analysis Plan for Low Detection Limit Water Column Study Phase 2.* Prepared for Port of Los Angeles and Port of Long Beach. December.

ENVIRON International Corporation. 2015. Validation of Analytical Laboratory Data from Eurofins CalScience, Inc. and Vista Analytical Laboratory for Low Detection Limit Water Column Study Event 1. Prepared for Port of Los Angeles and Port of Long Beach. March 9. Draft.

USEPA 2014. National Functional Guidelines for Superfund Organic Methods Data Review. OSWER 9355.0-132. EPA-540-R-014-002. August.

USEPA 2014. National Functional Guidelines for Inorganic Superfund Data Review. OSWER 9335.0-131. EPA-540-R-013-001. August.

March 9, 2015

Port of Los Angeles
San Pedro, California

Port of Long Beach
Long Beach, California

Re: Validation of Analytical Laboratory Data from Eurofins CalScience, Inc. and Vista Analytical Laboratory for Low Detection Limit Water Column Study Event 1

ENVIRON International Corporation (ENVIRON) reviewed analytical data for solid phase microextraction (SPME) fibers and sea water samples collected from the Los Angeles and Long Beach Harbor waters and Eastern San Pedro Bay. This data validation summary presents the results of the data review and validation process for samples collected on December 9 and December 10, 2014, and January 7 and January 8, 2015. Please note, only results currently provided from the laboratories could be evaluated at this time. Therefore, the sea water analysis by Marine Science Institute and sea water analysis from Eurofins CalScience of samples collected in January 2015 are not included in this data validation report. A second report with data validation of the outstanding results will follow after the results are received from the laboratories. The following samples/matrices were evaluated as part of this review:

- Sea water
    - REF-RW-01-G-M-20141209
    - OB-RW-01-G-M-20141209
    - OB-RW-01-G-B-20141209
    - SP-RW-01-G-M-20141209
    - LARE-RW-01-G-M-20141209
    - CP-RW-01-G-M-20141210
    - CS-RW-01-G-B-20141210
    - CS-RW-01-G-M-20141210
    - FH-RW-01-G-M-20141210
    - IA-RW-01-G-M-20141210
    - IB-RW-01-G-B-20141210
    - IB-RW-01-G-M-20141210

  - IB-RW-1001-G-M-20141210

- SPME fiber
  - FB-20141209_1522 (EPA Method 1668C)
  - FB-20141209_1531 (EPA Method 1699)
  - FBPRC1-20141209 (EPA Method 1668C)
  - FBPRC2-20141209 (EPA Method 1668C)
  - FBPRC3-20141209 (EPA Method 1668C)
  - FBPRC4-20141209 (EPA Method 1699)
  - FBPRC5-20141209 (EPA Method 1699)
  - FBPRC6-20141209 (EPA Method 1699)
  - CP-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - REF-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - REF-RW-01-S-M-PRC-20150107 (EPA Method 1668C and 1699)
  - OB-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - OB-RW-01-S-B-20150107 (EPA Method 1668C and 1699)
  - SP-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - LARE-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - IB-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - IB-RW-01-S-B-20150107 (EPA Method 1668C and 1699)
  - CS-RW-01-S-M-PRC-20150107 (EPA Method 1668C and 1699)
  - CS-RW-01-S-M-20150107 (EPA Method 1668C and 1699)
  - CS-RW-01-S-B-20150107 (EPA Method 1668C and 1699)
  - IA-RW-01-S-M-20150108 (EPA Method 1668C and 1699)
  - IA-RW-01-S-M-PRC-20150108 (EPA Method 1668C and 1699)
  - FH-RW-01-S-M-20150108 (EPA Method 1668C and 1699)

Vista Analytical Laboratory (Vista), located El Dorado Hills, California, performed the analyses of the SPME fibers. The data for the SPME analyses were reported in laboratory reports: 1400924, 1500015, 1500018, 1500034, and 1500035. Report 1400924 was revised on March 3, 2015 to correct laboratory qualifiers and include a summary of vial weights that was missing in the original report released. The samples were analyzed for one or more of the following analyses:

- Polychlorinated biphenyls (PCB) 209 congeners by United States Environmental Protection Agency (EPA) Method 1668C
- Dichlorodiphenyltrichloroethane and its derivatives (DDXs) by EPA Method 1699

Eurofins Calscience (Calscience), located in Garden Grove, California, performed the analyses of the sea water samples. The samples were reported in laboratory reports 14-12-0896 and 14-12-1034. The samples were analyzed for the following analyses:

- Dissolved Organic Carbon (DOC) by Standard Method (SM) 5310 D
- Total Suspended Solids (TSS) by SM 2540 D

The data were evaluated in general conformance of project objectives specified in the *Supplemental Sampling and Analysis Plan for Low Detection Limit Water Column Study Phase 2* (ENVIRON in association with Weston 2014) and *Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics Total Maximum Daily Load* (Anchor QEA, LLC 2014) [QAPP].

ENVIRON's validation review was based on procedures published by the EPA Contract Laboratory Program in their National Functional Guidelines for both organic and inorganic data review (USEPA 2014). The guidelines provide the criteria to review laboratory and field quality control information and apply the appropriate data qualifiers to the laboratory data. The Quality Control (QC) information checked by ENVIRON included case narratives, chain-of-custody (COC) forms, holding times, reporting limits, blank spikes, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) samples, internal standards, laboratory duplicates, and blanks. One project-specific field duplicate sample was collected with this data set for TSS analysis.

Two field blanks and six field blanks spiked with performance reference compounds (PRCs) were collected as part of this data set. The PRC field blanks analyzed for PCBs were spiked with Carbon-13 labeled PCB congeners: 13C-PCB-8, 13C-PCB-31, 13C-PCB-79, 13C-PCB-133, and 13C-PCB-178. The PRC list varied slightly from the sampling plan due to conflicts with the laboratory's internal standard list. The PRC field blanks analyzed for DDXs were spiked with d8-4,4'-DDD, d8-4,4'-DDT, d8-2,4'-DDE, and d8-4,4'-DDE.

The following sections summarize the findings for each analysis based on the review.

PCBs

The laboratory case narratives indicated that initial and continuing calibration verifications met the method acceptance criteria. Labeled standard recoveries were reviewed, and recoveries were within method acceptance criteria for all QC and field samples. The Ongoing Precision and Recovery (OPR) sample recoveries were within the method acceptance criteria.

Method blank results were evaluated for potential contamination. Concentrations that were below the low calibration limit were qualified "J" as estimated per the laboratory's standard procedure. The PCB congeners PCB-11, PCB-138/163/164, and PCB-153 were detected in Method Blank B5A0025-BLK-1, associated with field blank SPME fibers collected on December 9, 2014. The concentrations were below the laboratory's low calibration limit and were qualified "J". The analytes in associated samples in Report 1400924 were evaluated to determine if the results may have been biased by associated laboratory contamination. PCB-153 was not detected in any associated samples, and no data were qualified. PCB-11 and PCB-138/163/164 congeners were detected in associated samples within five times the concentrations in the associated blank, and were qualified "J" as estimated.

Field blanks were evaluated for detections. The following congeners were detected in one or more field blank: PCB-1, PCB-3, PCB-5/8, PCB-11, PCB-15, PCB-16/32, PCB-17, PCB-18, PCB-20/21/33, PCB-22, PCB-28, PCB-31, PCB-41/64/71/72, PCB-47, and PCB-61/70. Results that were below the laboratory's lowest calibration point were qualified "J" as estimated. The concentrations were compared to results reported for the field samples reported in laboratory reports 1500015, 1500018, 1500034, and 1500035. Any detections that were within five times the detections in the field blank were qualified "J" as estimated and may be biased due to contamination present during processing, sampling, and/or transport of the samples. Results that were greater than five times were determined not to be impacted by potential sources of contamination and those data were not qualified.

The laboratory reported some congener results that did not meet the method ion abundance ratio criteria with estimated maximum possible concentrations (EMPCs). These results are considered estimated and were qualified "J".

DDX

The laboratory case narratives indicated that initial and continuing calibration verifications met the method acceptance criteria. Labeled standard recoveries were reviewed, and recoveries were within method acceptance criteria for all QC and field samples. The OPR sample recoveries were within the method acceptance criteria.

Method blank results were evaluated for potential contamination. No analytes were detected above the sample quantitation limit in the method blank with one exception. The PRC analyte d8-4,4'DDE was detected in Method Blank B4L0110-BLK1 at 9.36 picograms (pg), above the sample-specific estimated detection level. The laboratory was not able to determine an explanation for this contaminant in the method blank. The result may be due to cross-contamination from the high concentrations of DDX PRCs that were spiked in the PRC field blanks. The PRC d8-4,4'DDE was also detected in field blank sample FB-20141209_1531, which was not pre-spiked with any PRCs. The detection in sample FB-20141209_1531 was qualified "J" as estimated due to potential contamination. FBPRC4-201412009, FBPRC5-201412009, and FBPRC6-201412009, were pre-spiked with the PRCs and those detections were approximately four orders of magnitude higher than the detection in the associated method blank; therefore, no data were qualified in those samples.

Field blanks were evaluated for detections. The target analyte 4,4'-DDT was detected in FB-20141209_1531 below the laboratory low calibration limit and was qualified "J" as estimated. The PRCs d8-4,4'DDD, d8-2,4'DDE, and d8-4,4'DDE were also detected in field blank FB-20141209-1531. The PRC d8-4,4'DDE was already qualified "J" because of the associated concentration in the method blank. The two other PRCs, d8-2,4'DDE and d8-4,4'DDE, were not pre-spiked in this field

blank. These results may be due to cross-contamination from the field blanks that were pre-spiked with PRCs; therefore, the results were qualified "J" as estimated.

General Chemistry

One field duplicate pair was collected as part of this data set for TSS analysis. Sample IB-RW-1001-GG-M-20141210 is a field duplicate of field sample IB-RW-01-G-M. Both results were less than five times the reporting limit. The difference between the results was less than two times the reporting limit, which satisfies the performance criteria for field duplicate precision specified in the QAPP.

No data qualifiers for general chemistry analyses DOC and TSS were applied based on the data validation.

Summary

Based on ENVIRON's evaluation, the analytical data included in this data set are usable as qualified. Data evaluated for this report were qualified "J" for results reported below the laboratory calibration limit, associated method and field blank results, and when the results were reported with EMPC values.

References

ENVIRON International Corporation in association with Weston Solutions, Inc. 2014. *Supplemental Sampling and Analysis Plan for Low Detection Limit Water Column Study Phase 2.* Prepared for Port of Los Angeles and Port of Long Beach. December.

Anchor QEA, LLC. 2014. *Draft Programmatic Quality Assurance Project Plan Supporting Compliance Monitoring and Special Studies Related to the Harbor Toxics Total Maximum Daily Load*. Prepared for Port of Long Beach and Port of Los Angeles. August.

USEPA 2014. National Functional Guidelines for Superfund Organic Methods Data Review. OSWER 9355.0-132. EPA-540-R-014-002. August

USEPA 2014. National Functional Guidelines for Inorganic Superfund Data Review. OSWER 9335.0-131. EPA-540-R-013-001. August.

APPENDIX E
ELECTRONIC DATA DELIVERABLES

(PROVIDED ELECTRONICALLY)