TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 580-81511-3
Client Project/Site: Portland Harbor Pre-Remedial Design

For:
AECOM
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Attn: Amy Dahl

M. Elaine Walker

Authorized for release by:
11/29/2018 3:59:14 PM

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

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

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Job ID: 580-81511-3

Laboratory: TestAmerica Seattle

Narrative

CASE NARRATIVE
Client: AECOM
Project: Portland Harbor Pre-Remedial Design
Report Number: 580-81511-3

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Five samples were received on 11/2/2018 2:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3º C and 3.4º C.

A sample container was provided to be archived frozen at the TestAmerica Sacramento laboratory pending potential additional analyses.

This report contains results for 1668A PCB Congeners, performed at TestAmerica Knoxville.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

POLYCHLORINATED BIPHENYLS CONGENERS (PCBS)

Samples PDI-ST-T06B-1810 (580-81511-1), PDI-ST-T06A-1810 (580-81511-2), PDI-ST-T07A-1810 (580-81511-3) and PDI-ST-T07B-1810 (580-81511-4) were analyzed for polychlorinated biphenyls congeners (PCBs) in accordance with EPA Method 1668A. The samples were prepared on 11/12/2018 and analyzed on 11/28/2018.

Several analytes were detected in method blank MB 140-25296/11-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

One ore more Ion abundance ratios are outside criteria for the Isotope Dilution Analytes (IDA) associated with the following sample: (LCSD 140-25296/13-B).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PCB CONGENERS - RINSE BLANK

Sample PDI-RB-ST-1810 (580-81511-5) was analyzed for PCB Congeners in accordance with 1668A. The sample was prepared on 11/15/2018 and analyzed on 11/28/2018.

Several analytes were detected in method blank MB 140-25438/11-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Job ID: 580-81511-3 (Continued)

Laboratory: TestAmerica Seattle (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

Dioxin

Qualifier	Qualifier Description
C93	The compound co-eluted with PCB-93
B	Compound was found in the blank and sample.
C90	The compound co-eluted with PCB-90
C98	The compound co-eluted with PCB-98
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
C	The compound co-eluted with other compounds
C86	The compound co-eluted with PCB-86
C110	The compound co-eluted with PCB-110
C85	The compound co-eluted with PCB-85
C108	The compound co-eluted with PCB-108
C12	The compound co-eluted with PCB-12
C129	The compound co-eluted with PCB-129
C139	The compound co-eluted with PCB-139
C134	The compound co-eluted with PCB-134
C147	The compound co-eluted with PCB-147
C135	The compound co-eluted with PCB-135
C156	The compound co-eluted with PCB-156
C128	The compound co-eluted with PCB-128
C153	The compound co-eluted with PCB-153
C171	The compound co-eluted with PCB-171
C183	The compound co-eluted with PCB-183
C180	The compound co-eluted with PCB-180
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C26	The compound co-eluted with PCB-26
C18	The compound co-eluted with PCB-18
C21	The compound co-eluted with PCB-21
C40	The compound co-eluted with PCB-40
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C49	The compound co-eluted with PCB-49
C61	The compound co-eluted with PCB-61
C43	The compound co-eluted with PCB-43
C88	The compound co-eluted with PCB-88
C83	The compound co-eluted with PCB-83

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: PDI-ST-T06B-1810
Date Collected: 10/31/18 09:45
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-1
Matrix: Solid
Percent Solids: 28.1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.018	0.00043	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-2	**0.0026**	**J q**	0.018	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-3	ND		0.018	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-4	**0.016**	**J q**	0.035	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-5	ND		0.018	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-6	**0.0036**	**J q**	0.018	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-7	ND		0.018	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-8	**0.013**	**J q**	0.035	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-9	ND		0.018	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-10	ND		0.018	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-11	**0.088**		0.035	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-12	**0.0042**	**J C q**	0.035	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-13	**0.0042**	**J C12 q**	0.035	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-14	ND		0.018	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-15	**0.016**	**J q**	0.018	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-16	**0.0060**	**J q**	0.018	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-17	**0.015**	**J q**	0.018	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-18	**0.030**	**J C**	0.035	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-19	**0.019**		0.018	0.00059	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-20	**0.058**	**C B**	0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-21	**0.020**	**J C B q**	0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-22	**0.018**		0.018	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-23	ND		0.018	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-24	ND		0.018	0.00040	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-25	**0.0071**	**J**	0.018	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-26	**0.012**	**J C**	0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-27	ND		0.018	0.00035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-28	**0.058**	**B C20**	0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-29	**0.012**	**J C26**	0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-30	**0.030**	**J C18**	0.035	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-31	**0.064**		0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-32	**0.011**	**J**	0.018	0.00033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-33	**0.020**	**J B C21 q**	0.035	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-34	ND		0.018	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-35	**0.0039**	**J q**	0.018	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-36	ND		0.018	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-37	**0.030**		0.018	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-38	ND		0.018	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-39	ND		0.018	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-40	**0.12**	**C**	0.053	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-41	**0.12**	**C40**	0.053	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-42	**0.056**		0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-43	**0.019**	**J C**	0.035	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-44	**0.55**	**C B**	0.053	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-45	**0.023**	**J C q**	0.035	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-46	**0.0083**	**J q**	0.018	0.0047	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-47	**0.55**	**B C44**	0.053	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-48	**0.037**		0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-49	**0.29**	**C**	0.035	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1

Client Sample ID: PDI-ST-T06B-1810
Date Collected: 10/31/18 09:45
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-1
Matrix: Solid
Percent Solids: 28.1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.044	C	0.035	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-51	0.023	J C45 q	0.035	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-52	1.3		0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-53	0.044	C50	0.035	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-54	0.0042	J q	0.018	0.00015	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-55	0.0093	J q	0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-56	0.13		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-57	ND		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-58	0.0040	J	0.018	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-59	0.015	J C	0.053	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-60	0.058		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-61	1.2	C B	0.071	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-62	0.015	J C59	0.053	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-63	0.012	J	0.018	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-64	0.17		0.018	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-65	0.55	B C44	0.053	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-66	0.36	B	0.018	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-67	0.0075	J	0.018	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-68	ND		0.018	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-69	0.29	C49	0.035	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-70	1.2	C61 B	0.071	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-71	0.12	C40	0.053	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-72	ND		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-73	0.019	J C43	0.035	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-74	1.2	C61 B	0.071	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-75	0.015	J C59	0.053	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-76	1.2	C61 B	0.071	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-77	0.094		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-78	ND		0.018	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-79	0.015	J	0.018	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-80	ND		0.018	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-81	0.0035	J	0.018	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-82	0.36		0.018	0.00072	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-83	1.5	C	0.035	0.00066	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-84	0.76		0.018	0.00073	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-85	0.52	C	0.053	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-86	2.0	C	0.11	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-87	2.0	C86	0.11	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-88	0.35	C	0.035	0.00065	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-89	0.028		0.018	0.00071	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-90	2.8	C B	0.053	0.00055	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-91	0.35	C88	0.035	0.00065	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-92	0.46		0.018	0.00062	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-93	0.048	C	0.035	0.00062	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-94	0.012	J q	0.018	0.00071	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-95	2.2	B	0.018	0.00068	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-96	0.020		0.018	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-97	2.0	C86	0.11	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-98	0.074	C	0.035	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1

Client Sample ID: PDI-ST-T06B-1810
Date Collected: 10/31/18 09:45
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-1
Matrix: Solid
Percent Solids: 28.1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	1.5	C83	0.035	0.00066	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-100	0.048	C93	0.035	0.00062	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-101	2.8	B C90	0.053	0.00055	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-102	0.074	C98	0.035	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-103	0.013	J q	0.018	0.00062	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-104	ND		0.018	0.00047	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-105	1.2		0.018	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-106	ND		0.018	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-107	0.20		0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-108	0.12	C	0.035	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-109	2.0	C86	0.11	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-110	3.3	C B	0.035	0.00045	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-111	ND		0.018	0.00044	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-112	ND		0.018	0.00046	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-113	2.8	B C90	0.053	0.00055	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-114	0.071		0.018	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-115	3.3	B C110	0.035	0.00045	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-116	0.52	C85	0.053	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-117	0.52	C85	0.053	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-118	2.7		0.018	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-119	2.0	C86	0.11	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-120	ND		0.018	0.00045	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-121	ND		0.018	0.00046	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-122	0.056		0.018	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-123	0.044	q	0.018	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-124	0.12	C108	0.035	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-125	2.0	C86	0.11	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-126	0.043		0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-127	ND		0.018	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-128	0.62	C	0.035	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-129	3.5	C B	0.071	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-130	0.25		0.018	0.0059	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-131	0.064		0.018	0.0061	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-132	1.2		0.018	0.0057	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-133	0.038		0.018	0.0055	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-134	0.20	C	0.035	0.0058	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-135	0.68	C	0.035	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-136	0.30		0.018	0.00078	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-137	0.22		0.018	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-138	3.5	B C129	0.071	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-139	0.073	C	0.035	0.0049	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-140	0.073	C139	0.035	0.0049	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-141	0.54		0.018	0.0052	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-142	ND		0.018	0.0055	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-143	0.20	C134	0.035	0.0058	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-144	0.11		0.018	0.00098	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-145	0.0037	J q	0.018	0.00074	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-146	0.39		0.018	0.0049	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-147	2.1	C	0.035	0.0056	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1

Client Sample ID: PDI-ST-T06B-1810
Date Collected: 10/31/18 09:45
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-1
Matrix: Solid
Percent Solids: 28.1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0030	J q	0.018	0.0010	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-149	2.1	C147	0.035	0.0056	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-150	0.0030	J	0.018	0.00071	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-151	0.68	C135	0.035	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-152	0.0038	J	0.018	0.00076	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-153	2.1	C	0.035	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-154	0.032		0.018	0.00084	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-155	ND		0.018	0.00071	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-156	0.51	C	0.035	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-157	0.51	C156	0.035	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-158	0.40		0.018	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-159	0.0090	J	0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-160	3.5	B C129	0.071	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-161	ND		0.018	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-162	0.015	J	0.018	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-163	3.5	B C129	0.071	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-164	0.23		0.018	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-165	ND		0.018	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-166	0.62	C128	0.035	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-167	0.16	B	0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-168	2.1	C153	0.035	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-169	ND		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-170	0.46		0.018	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-171	0.13	C	0.035	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-172	0.060		0.018	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-173	0.13	C171	0.035	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-174	0.31		0.018	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-175	0.014	J	0.018	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-176	0.037		0.018	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-177	0.19		0.018	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-178	0.056		0.018	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-179	0.10		0.018	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-180	0.68	C	0.035	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-181	0.010	J	0.018	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-182	0.0079	J	0.018	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-183	0.20	C	0.035	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-184	ND		0.018	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-185	0.20	C183	0.035	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-186	ND		0.018	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-187	0.32		0.018	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-188	ND		0.018	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-189	0.020	q	0.018	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-190	0.071		0.018	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-191	0.021		0.018	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-192	ND		0.018	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-193	0.68	C180	0.035	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-194	0.10		0.018	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-195	0.044		0.018	0.0058	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-196	0.051		0.018	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1

Client Sample ID: PDI-ST-T06B-1810
Date Collected: 10/31/18 09:45
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-1
Matrix: Solid
Percent Solids: 28.1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	**0.0042**	**J q**	0.018	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-198	**0.13**	**C**	0.035	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-199	**0.13**	**C198**	0.035	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-200	**0.0094**	**J**	0.018	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-201	**0.012**	**J q**	0.018	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-202	**0.028**		0.018	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-203	**0.071**		0.018	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-204	ND		0.018	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-205	ND		0.018	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-206	**0.065**	**q**	0.018	0.0051	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-207	ND		0.018	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-208	**0.021**		0.018	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1
PCB-209	**0.067**		0.018	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 04:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*59*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-3L	*63*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-4L	*75*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-15L	*75*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-19L	*92*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-37L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-54L	*50*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-77L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-81L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-104L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-105L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-114L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-118L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-123L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-126L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-155L	*82*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-156L	*83*	*C*	*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-157L	*83*	*C156*	*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-167L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-169L	*91*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-170L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-188L	*95*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-189L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-202L	*99*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-205L	*75*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-206L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-208L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-209L	*81*		*30 - 140*	*11/12/18 10:55*	*11/28/18 04:43*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*94*		*40 - 125*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-111L	*91*		*40 - 125*	*11/12/18 10:55*	*11/28/18 04:43*	*1*
PCB-178L	*100*		*40 - 125*	*11/12/18 10:55*	*11/28/18 04:43*	*1*

Client Sample ID: PDI-ST-T06A-1810
Date Collected: 10/31/18 10:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-2
Matrix: Solid
Percent Solids: 23.5

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.021	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-2	ND		0.021	0.00058	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-3	ND		0.021	0.00058	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-4	**0.054**	**q**	0.042	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-5	ND		0.021	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-6	**0.024**		0.021	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-7	ND		0.021	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-8	**0.031**	**J**	0.042	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-9	ND		0.021	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-10	**0.0035**	**J q**	0.021	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-11	**0.13**		0.042	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-12	**0.0057**	**J C q**	0.042	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-13	**0.0057**	**J C12 q**	0.042	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-14	ND		0.021	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-15	**0.024**		0.021	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-16	**0.014**	**J**	0.021	0.00077	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-17	**0.041**		0.021	0.00069	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-18	**0.044**	**C**	0.042	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-19	**0.089**		0.021	0.00085	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-20	**0.087**	**C B**	0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-21	**0.021**	**J C B q**	0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-22	**0.017**	**J**	0.021	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-23	ND		0.021	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-24	ND		0.021	0.00058	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-25	**0.016**	**J**	0.021	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-26	**0.023**	**J C**	0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-27	**0.013**	**J**	0.021	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-28	**0.087**	**B C20**	0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-29	**0.023**	**J C26**	0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-30	**0.044**	**C18**	0.042	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-31	**0.074**		0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-32	**0.031**		0.021	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-33	**0.021**	**J B C21 q**	0.042	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-34	ND		0.021	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-35	**0.0029**	**J**	0.021	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-36	ND		0.021	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-37	**0.029**		0.021	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-38	ND		0.021	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-39	ND		0.021	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-40	**0.087**	**C**	0.064	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-41	**0.087**	**C40**	0.064	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-42	**0.031**		0.021	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-43	**0.018**	**J C**	0.042	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-44	**0.38**	**C B**	0.064	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-45	**0.054**	**C**	0.042	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-46	**0.0086**	**J**	0.021	0.0038	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-47	**0.38**	**B C44**	0.064	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-48	**0.020**	**J**	0.021	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-49	**0.20**	**C**	0.042	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1

Client Sample ID: PDI-ST-T06A-1810
Date Collected: 10/31/18 10:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-2
Matrix: Solid
Percent Solids: 23.5

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.060	C	0.042	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-51	0.054	C45	0.042	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-52	0.68		0.021	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-53	0.060	C50	0.042	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-54	0.017	J	0.021	0.000052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-55	ND		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-56	0.081		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-57	ND		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-58	ND		0.021	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-59	0.012	J C	0.064	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-60	0.038		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-61	0.67	C B	0.085	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-62	0.012	J C59	0.064	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-63	0.0074	J q	0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-64	0.088		0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-65	0.38	B C44	0.064	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-66	0.22	B	0.021	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-67	ND		0.021	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-68	ND		0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-69	0.20	C49	0.042	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-70	0.67	C61 B	0.085	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-71	0.087	C40	0.064	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-72	ND		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-73	0.018	J C43	0.042	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-74	0.67	C61 B	0.085	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-75	0.012	J C59	0.064	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-76	0.67	C61 B	0.085	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-77	0.048	q	0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-78	ND		0.021	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-79	0.0059	J q	0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-80	ND		0.021	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-81	ND		0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-82	0.19		0.021	0.00069	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-83	0.83	C	0.042	0.00063	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-84	0.39		0.021	0.00070	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-85	0.28	C	0.064	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-86	1.1	C	0.13	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-87	1.1	C86	0.13	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-88	0.21	C	0.042	0.00063	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-89	ND		0.021	0.00068	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-90	1.6	C B	0.064	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-91	0.21	C88	0.042	0.00063	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-92	0.27		0.021	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-93	0.034	J C	0.042	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-94	0.011	J	0.021	0.00068	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-95	1.2	B	0.021	0.00066	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-96	0.012	J q	0.021	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-97	1.1	C86	0.13	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-98	0.035	J C q	0.042	0.00058	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1

Client Sample ID: PDI-ST-T06A-1810
Date Collected: 10/31/18 10:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-2
Matrix: Solid
Percent Solids: 23.5

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.83	C83	0.042	0.00063	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-100	0.034	J C93	0.042	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-101	1.6	B C90	0.064	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-102	0.035	J C98 q	0.042	0.00058	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-103	0.016	J	0.021	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-104	ND		0.021	0.00046	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-105	0.66		0.021	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-106	ND		0.021	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-107	0.10	q	0.021	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-108	0.065	C	0.042	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-109	1.1	C86	0.13	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-110	1.9	C B	0.042	0.00044	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-111	ND		0.021	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-112	0.011	J	0.021	0.00045	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-113	1.6	B C90	0.064	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-114	0.038		0.021	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-115	1.9	B C110	0.042	0.00044	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-116	0.28	C85	0.064	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-117	0.28	C85	0.064	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-118	1.6		0.021	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-119	1.1	C86	0.13	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-120	ND		0.021	0.00043	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-121	ND		0.021	0.00044	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-122	0.022	q	0.021	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-123	0.033	q	0.021	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-124	0.065	C108	0.042	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-125	1.1	C86	0.13	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-126	0.020	J q	0.021	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-127	ND		0.021	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-128	0.35	C	0.042	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-129	2.2	C B	0.085	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-130	0.14		0.021	0.0056	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-131	0.030		0.021	0.0059	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-132	0.67		0.021	0.0055	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-133	0.026		0.021	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-134	0.12	C	0.042	0.0056	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-135	0.50	C	0.042	0.00077	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-136	0.21		0.021	0.00055	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-137	0.12		0.021	0.0048	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-138	2.2	B C129	0.085	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-139	0.033	J C	0.042	0.0048	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-140	0.033	J C139	0.042	0.0048	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-141	0.35		0.021	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-142	ND		0.021	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-143	0.12	C134	0.042	0.0056	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-144	0.066		0.021	0.00070	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-145	ND		0.021	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-146	0.27		0.021	0.0047	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-147	1.4	C	0.042	0.0054	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1

Client Sample ID: PDI-ST-T06A-1810
Date Collected: 10/31/18 10:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-2
Matrix: Solid
Percent Solids: 23.5

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0030	J q	0.021	0.00074	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-149	1.4	C147	0.042	0.0054	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-150	0.0046	J	0.021	0.00050	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-151	0.50	C135	0.042	0.00077	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-152	0.0021	J	0.021	0.00054	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-153	1.4	C	0.042	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-154	0.024		0.021	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-155	ND		0.021	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-156	0.31	C	0.042	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-157	0.31	C156	0.042	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-158	0.25		0.021	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-159	ND		0.021	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-160	2.2	B C129	0.085	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-161	ND		0.021	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-162	0.0070	J q	0.021	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-163	2.2	B C129	0.085	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-164	0.14		0.021	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-165	ND		0.021	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-166	0.35	C128	0.042	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-167	0.092	B	0.021	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-168	1.4	C153	0.042	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-169	ND		0.021	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-170	0.38		0.021	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-171	0.11	C	0.042	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-172	0.061		0.021	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-173	0.11	C171	0.042	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-174	0.30		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-175	0.013	J	0.021	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-176	0.039		0.021	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-177	0.19		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-178	0.064		0.021	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-179	0.12		0.021	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-180	0.69	C	0.042	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-181	ND		0.021	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-182	0.0058	J	0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-183	0.21	C	0.042	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-184	ND		0.021	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-185	0.21	C183	0.042	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-186	ND		0.021	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-187	0.36		0.021	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-188	ND		0.021	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-189	0.015	J	0.021	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-190	0.064		0.021	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-191	0.014	J	0.021	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-192	ND		0.021	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-193	0.69	C180	0.042	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-194	0.13		0.021	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-195	0.056		0.021	0.0059	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-196	0.062		0.021	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1

Client Sample ID: PDI-ST-T06A-1810
Date Collected: 10/31/18 10:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-2
Matrix: Solid
Percent Solids: 23.5

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	**0.0056**	**J**	0.021	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-198	**0.15**	**C**	0.042	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-199	**0.15**	**C198**	0.042	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-200	**0.015**	**J q**	0.021	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-201	**0.012**	**J q**	0.021	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-202	**0.028**		0.021	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-203	**0.089**		0.021	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-204	ND		0.021	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-205	ND		0.021	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-206	**0.070**		0.021	0.0058	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-207	ND		0.021	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-208	**0.019**	**J q**	0.021	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1
PCB-209	**0.076**		0.021	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 05:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*59*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-3L	*61*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-4L	*75*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-15L	*77*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-19L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-37L	*87*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-54L	*50*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-77L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-81L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-104L	*81*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-105L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-114L	*89*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-118L	*89*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-123L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-126L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-155L	*82*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-156L	*82*	*C*	*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-157L	*82*	*C156*	*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-167L	*87*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-169L	*93*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-170L	*83*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-188L	*91*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-189L	*81*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-202L	*101*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-205L	*74*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-206L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-208L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-209L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 05:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*92*		*40 - 125*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-111L	*90*		*40 - 125*	*11/12/18 10:55*	*11/28/18 05:45*	*1*
PCB-178L	*97*		*40 - 125*	*11/12/18 10:55*	*11/28/18 05:45*	*1*

Client Sample ID: PDI-ST-T07A-1810
Date Collected: 10/31/18 16:55
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-3
Matrix: Solid
Percent Solids: 19.9

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.024	0.00044	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-2	ND		0.024	0.00050	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-3	ND		0.024	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-4	ND		0.049	0.0049	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-5	ND		0.024	0.0038	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-6	ND		0.024	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-7	ND		0.024	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-8	**0.015**	**J q**	0.049	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-9	ND		0.024	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-10	ND		0.024	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-11	**0.13**		0.049	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-12	**0.0049**	**J C q**	0.049	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-13	**0.0049**	**J C12 q**	0.049	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-14	ND		0.024	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-15	**0.018**	**J q**	0.024	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-16	**0.011**	**J q**	0.024	0.00065	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-17	**0.020**	**J q**	0.024	0.00058	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-18	**0.040**	**J C**	0.049	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-19	**0.0055**	**J**	0.024	0.00071	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-20	**0.088**	**C B**	0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-21	**0.033**	**J C B**	0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-22	**0.026**		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-23	ND		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-24	ND		0.024	0.00049	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-25	**0.012**	**J**	0.024	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-26	**0.018**	**J C**	0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-27	**0.0036**	**J q**	0.024	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-28	**0.088**	**B C20**	0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-29	**0.018**	**J C26**	0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-30	**0.040**	**J C18**	0.049	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-31	**0.071**		0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-32	**0.013**	**J q**	0.024	0.00040	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-33	**0.033**	**J B C21**	0.049	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-34	ND		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-35	ND		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-36	ND		0.024	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-37	**0.027**		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-38	ND		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-39	ND		0.024	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-40	**0.052**	**J C**	0.073	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-41	**0.052**	**J C40**	0.073	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-42	**0.029**		0.024	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-43	**0.0043**	**J C q**	0.049	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-44	**0.22**	**C B**	0.073	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-45	**0.026**	**J C**	0.049	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-46	**0.0052**	**J q**	0.024	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-47	**0.22**	**B C44**	0.073	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-48	**0.019**	**J**	0.024	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-49	**0.097**	**C**	0.049	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1

Client Sample ID: PDI-ST-T07A-1810
Date Collected: 10/31/18 16:55
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-3
Matrix: Solid
Percent Solids: 19.9

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.0092	J C q	0.049	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-51	0.026	J C45	0.049	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-52	0.21		0.024	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-53	0.0092	J C50 q	0.049	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-54	ND		0.024	0.000074	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-55	0.0057	J q	0.024	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-56	0.046		0.024	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-57	ND		0.024	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-58	ND		0.024	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-59	0.0081	J C	0.073	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-60	0.019	J	0.024	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-61	0.24	C B	0.097	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-62	0.0081	J C59	0.073	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-63	0.0052	J	0.024	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-64	0.044		0.024	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-65	0.22	B C44	0.073	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-66	0.13	B	0.024	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-67	0.0023	J q	0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-68	0.015	J	0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-69	0.097	C49	0.049	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-70	0.24	C61 B	0.097	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-71	0.052	J C40	0.073	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-72	0.0049	J q	0.024	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-73	0.0043	J C43 q	0.049	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-74	0.24	C61 B	0.097	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-75	0.0081	J C59	0.073	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-76	0.24	C61 B	0.097	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-77	0.013	J	0.024	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-78	ND		0.024	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-79	ND		0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-80	ND		0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-81	ND		0.024	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-82	0.032	q	0.024	0.00081	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-83	0.24	C	0.049	0.00074	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-84	0.079		0.024	0.00081	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-85	0.070	J C	0.073	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-86	0.22	C	0.15	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-87	0.22	C86	0.15	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-88	0.049	C q	0.049	0.00073	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-89	0.0034	J q	0.024	0.00079	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-90	0.37	C B	0.073	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-91	0.049	C88 q	0.049	0.00073	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-92	0.069		0.024	0.00069	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-93	0.0047	J C q	0.049	0.00070	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-94	ND		0.024	0.00079	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-95	0.28	B	0.024	0.00076	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-96	ND		0.024	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-97	0.22	C86	0.15	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-98	0.011	J C	0.049	0.00068	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1

Client Sample ID: PDI-ST-T07A-1810
Date Collected: 10/31/18 16:55
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-3
Matrix: Solid
Percent Solids: 19.9

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.24	C83	0.049	0.00074	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-100	0.0047	J C93 q	0.049	0.00070	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-101	0.37	B C90	0.073	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-102	0.011	J C98	0.049	0.00068	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-103	0.0077	J	0.024	0.00070	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-104	ND		0.024	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-105	0.12		0.024	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-106	ND		0.024	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-107	0.028		0.024	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-108	0.013	J C	0.049	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-109	0.22	C86	0.15	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-110	0.42	C B	0.049	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-111	0.0030	J	0.024	0.00049	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-112	0.0039	J q	0.024	0.00052	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-113	0.37	B C90	0.073	0.00061	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-114	0.0056	J q	0.024	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-115	0.42	B C110	0.049	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-116	0.070	J C85	0.073	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-117	0.070	J C85	0.073	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-118	0.32		0.024	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-119	0.22	C86	0.15	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-120	0.0044	J	0.024	0.00050	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-121	ND		0.024	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-122	ND		0.024	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-123	0.0077	J	0.024	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-124	0.013	J C108	0.049	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-125	0.22	C86	0.15	0.00060	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-126	ND		0.024	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-127	ND		0.024	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-128	0.075	C	0.049	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-129	0.57	C B	0.097	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-130	0.039		0.024	0.0054	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-131	ND		0.024	0.0056	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-132	0.15		0.024	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-133	0.0072	J	0.024	0.0051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-134	0.027	J C	0.049	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-135	0.15	C	0.049	0.00041	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-136	0.056		0.024	0.00030	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-137	0.021	J	0.024	0.0046	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-138	0.57	B C129	0.097	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-139	0.0090	J C q	0.049	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-140	0.0090	J C139 q	0.049	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-141	0.075		0.024	0.0048	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-142	ND		0.024	0.0051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-143	0.027	J C134	0.049	0.0053	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-144	0.016	J	0.024	0.00037	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-145	ND		0.024	0.00028	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-146	0.095		0.024	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-147	0.41	C	0.049	0.0051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1

Client Sample ID: PDI-ST-T07A-1810
Date Collected: 10/31/18 16:55
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-3
Matrix: Solid
Percent Solids: 19.9

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0026	J q	0.024	0.00040	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-149	0.41	C147	0.049	0.0051	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-150	0.0019	J q	0.024	0.00027	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-151	0.15	C135	0.049	0.00041	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-152	ND		0.024	0.00029	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-153	0.42	C	0.049	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-154	0.011	J	0.024	0.00032	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-155	0.0011	J	0.024	0.00027	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-156	0.053	C	0.049	0.0047	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-157	0.053	C156	0.049	0.0047	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-158	0.047		0.024	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-159	0.0040	J q	0.024	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-160	0.57	B C129	0.097	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-161	ND		0.024	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-162	ND		0.024	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-163	0.57	B C129	0.097	0.0041	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-164	0.032		0.024	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-165	ND		0.024	0.0038	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-166	0.075	C128	0.049	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-167	0.017	J B	0.024	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-168	0.42	C153	0.049	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-169	ND		0.024	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-170	0.13		0.024	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-171	0.036	J C	0.049	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-172	0.021	J q	0.024	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-173	0.036	J C171	0.049	0.0023	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-174	0.11		0.024	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-175	ND		0.024	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-176	0.011	J q	0.024	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-177	0.082		0.024	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-178	0.023	J q	0.024	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-179	0.051		0.024	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-180	0.26	C	0.049	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-181	ND		0.024	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-182	ND		0.024	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-183	0.080	C	0.049	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-184	ND		0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-185	0.080	C183	0.049	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-186	ND		0.024	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-187	0.18		0.024	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-188	ND		0.024	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-189	ND		0.024	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-190	0.025		0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-191	0.0073	J	0.024	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-192	ND		0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-193	0.26	C180	0.049	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-194	0.062		0.024	0.0052	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-195	0.025		0.024	0.0057	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-196	0.031		0.024	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1

Client Sample ID: PDI-ST-T07A-1810
Date Collected: 10/31/18 16:55
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-3
Matrix: Solid
Percent Solids: 19.9

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.024	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-198	**0.067**	**C q**	0.049	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-199	**0.067**	**C198 q**	0.049	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-200	**0.0070**	**J**	0.024	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-201	**0.0084**	**J**	0.024	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-202	**0.020**	**J**	0.024	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-203	**0.048**		0.024	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-204	ND		0.024	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-205	ND		0.024	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-206	**0.042**	**q**	0.024	0.0050	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-207	ND		0.024	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-208	**0.017**	**J**	0.024	0.0038	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1
PCB-209	**0.067**		0.024	0.0037	ng/g	☼	11/12/18 10:55	11/28/18 06:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*58*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-3L	*59*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-4L	*72*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-15L	*75*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-19L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-37L	*82*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-54L	*49*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-77L	*83*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-81L	*80*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-104L	*77*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-105L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-114L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-118L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-123L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-126L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-155L	*80*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-156L	*82*	*C*	*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-157L	*82*	*C156*	*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-167L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-169L	*92*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-170L	*83*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-188L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-189L	*80*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-202L	*100*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-205L	*74*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-206L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-208L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-209L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 06:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*89*		*40 - 125*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-111L	*87*		*40 - 125*	*11/12/18 10:55*	*11/28/18 06:46*	*1*
PCB-178L	*96*		*40 - 125*	*11/12/18 10:55*	*11/28/18 06:46*	*1*

Client Sample ID: PDI-ST-T07B-1810
Date Collected: 10/31/18 17:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-4
Matrix: Solid
Percent Solids: 21.7

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0015	J q	0.023	0.00045	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-2	0.0039	J	0.023	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-3	ND		0.023	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-4	0.0070	J q	0.046	0.0043	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-5	ND		0.023	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-6	0.0040	J q	0.023	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-7	ND		0.023	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-8	0.012	J q	0.046	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-9	ND		0.023	0.0034	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-10	ND		0.023	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-11	0.11		0.046	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-12	0.0040	J C q	0.046	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-13	0.0040	J C12 q	0.046	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-14	ND		0.023	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-15	0.016	J q	0.023	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-16	0.0084	J q	0.023	0.00043	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-17	0.015	J	0.023	0.00039	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-18	0.028	J C	0.046	0.00034	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-19	0.0030	J q	0.023	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-20	0.059	C B	0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-21	0.023	J C B	0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-22	0.018	J	0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-23	ND		0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-24	0.0015	J q	0.023	0.00033	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-25	0.0051	J	0.023	0.0010	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-26	0.011	J C	0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-27	0.0019	J q	0.023	0.00028	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-28	0.059	B C20	0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-29	0.011	J C26	0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-30	0.028	J C18	0.046	0.00034	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-31	0.048		0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-32	0.011	J	0.023	0.00027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-33	0.023	J B C21	0.046	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-34	ND		0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-35	ND		0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-36	ND		0.023	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-37	0.021	J	0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-38	ND		0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-39	ND		0.023	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-40	0.029	J C	0.069	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-41	0.029	J C40	0.069	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-42	0.016	J	0.023	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-43	0.0037	J C	0.046	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-44	0.073	C B	0.069	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-45	0.0076	J C q	0.046	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-46	0.0043	J	0.023	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-47	0.073	B C44	0.069	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-48	0.011	J	0.023	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-49	0.051	C	0.046	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1

Client Sample ID: PDI-ST-T07B-1810
Date Collected: 10/31/18 17:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-4
Matrix: Solid
Percent Solids: 21.7

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.0087	J C	0.046	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-51	0.0076	J C45 q	0.046	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-52	0.12		0.023	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-53	0.0087	J C50	0.046	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-54	ND		0.023	0.000098	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-55	0.0041	J q	0.023	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-56	0.030		0.023	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-57	ND		0.023	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-58	ND		0.023	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-59	0.0054	J C	0.069	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-60	0.015	J	0.023	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-61	0.15	C B	0.092	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-62	0.0054	J C59	0.069	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-63	0.0027	J	0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-64	0.031		0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-65	0.073	B C44	0.069	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-66	0.080	B	0.023	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-67	ND		0.023	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-68	0.0020	J	0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-69	0.051	C49	0.046	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-70	0.15	C61 B	0.092	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-71	0.029	J C40	0.069	0.0025	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-72	0.0027	J	0.023	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-73	0.0037	J C43	0.046	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-74	0.15	C61 B	0.092	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-75	0.0054	J C59	0.069	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-76	0.15	C61 B	0.092	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-77	0.011	J	0.023	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-78	ND		0.023	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-79	ND		0.023	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-80	ND		0.023	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-81	ND		0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-82	0.025	q	0.023	0.00056	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-83	0.15	C	0.046	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-84	0.051		0.023	0.00057	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-85	0.050	J C	0.069	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-86	0.14	C q	0.14	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-87	0.14	C86 q	0.14	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-88	0.028	J C	0.046	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-89	ND		0.023	0.00055	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-90	0.23	C B	0.069	0.00043	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-91	0.028	J C88	0.046	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-92	0.042		0.023	0.00048	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-93	0.0026	J C q	0.046	0.00049	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-94	ND		0.023	0.00055	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-95	0.18	B	0.023	0.00053	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-96	ND		0.023	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-97	0.14	C86 q	0.14	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-98	0.0063	J C	0.046	0.00047	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1

Client Sample ID: PDI-ST-T07B-1810
Date Collected: 10/31/18 17:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-4
Matrix: Solid
Percent Solids: 21.7

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.15	C83	0.046	0.00051	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-100	0.0026	J C93 q	0.046	0.00049	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-101	0.23	B C90	0.069	0.00043	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-102	0.0063	J C98	0.046	0.00047	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-103	ND		0.023	0.00049	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-104	ND		0.023	0.00037	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-105	0.097		0.023	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-106	ND		0.023	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-107	0.020	J	0.023	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-108	0.010	J C	0.046	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-109	0.14	C86 q	0.14	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-110	0.29	C B	0.046	0.00036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-111	ND		0.023	0.00034	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-112	ND		0.023	0.00036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-113	0.23	B C90	0.069	0.00043	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-114	0.0035	J q	0.023	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-115	0.29	B C110	0.046	0.00036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-116	0.050	J C85	0.069	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-117	0.050	J C85	0.069	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-118	0.25		0.023	0.0024	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-119	0.14	C86 q	0.14	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-120	0.0015	J q	0.023	0.00035	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-121	ND		0.023	0.00036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-122	ND		0.023	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-123	0.0036	J q	0.023	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-124	0.010	J C108	0.046	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-125	0.14	C86 q	0.14	0.00042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-126	0.0032	J	0.023	0.0027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-127	ND		0.023	0.0026	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-128	0.060	C	0.046	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-129	0.44	C B	0.092	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-130	0.020	J q	0.023	0.0047	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-131	ND		0.023	0.0049	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-132	0.10		0.023	0.0046	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-133	0.0054	J q	0.023	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-134	0.019	J C	0.046	0.0046	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-135	0.084	C q	0.046	0.00039	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-136	0.029	q	0.023	0.00028	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-137	0.018	J	0.023	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-138	0.44	B C129	0.092	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-139	0.0061	J C	0.046	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-140	0.0061	J C139	0.046	0.0040	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-141	0.065		0.023	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-142	ND		0.023	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-143	0.019	J C134	0.046	0.0046	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-144	0.0098	J	0.023	0.00036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-145	ND		0.023	0.00027	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-146	0.061		0.023	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-147	0.29	C	0.046	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1

Client Sample ID: PDI-ST-T07B-1810
Date Collected: 10/31/18 17:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-4
Matrix: Solid
Percent Solids: 21.7

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.023	0.00038	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-149	**0.29**	**C147**	0.046	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-150	ND		0.023	0.00026	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-151	**0.084**	**C135 q**	0.046	0.00039	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-152	ND		0.023	0.00028	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-153	**0.31**	**C**	0.046	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-154	**0.0073**	**J q**	0.023	0.00031	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-155	ND		0.023	0.00026	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-156	**0.046**	**C**	0.046	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-157	**0.046**	**C156**	0.046	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-158	**0.038**		0.023	0.0028	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-159	ND		0.023	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-160	**0.44**	**B C129**	0.092	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-161	ND		0.023	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-162	ND		0.023	0.0029	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-163	**0.44**	**B C129**	0.092	0.0036	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-164	**0.027**		0.023	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-165	ND		0.023	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-166	**0.060**	**C128**	0.046	0.0035	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-167	**0.014**	**J B**	0.023	0.0022	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-168	**0.31**	**C153**	0.046	0.0031	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-169	ND		0.023	0.0021	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-170	**0.11**		0.023	0.0020	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-171	**0.028**	**J C q**	0.046	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-172	**0.021**	**J**	0.023	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-173	**0.028**	**J C171 q**	0.046	0.0019	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-174	**0.10**		0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-175	**0.0059**	**J**	0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-176	**0.010**	**J**	0.023	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-177	**0.061**		0.023	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-178	**0.024**	**q**	0.023	0.0018	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-179	**0.042**		0.023	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-180	**0.23**	**C**	0.046	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-181	ND		0.023	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-182	ND		0.023	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-183	**0.070**	**C**	0.046	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-184	ND		0.023	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-185	**0.070**	**C183**	0.046	0.0017	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-186	ND		0.023	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-187	**0.15**		0.023	0.0016	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-188	ND		0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-189	ND		0.023	0.0030	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-190	**0.021**	**J**	0.023	0.0012	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-191	**0.0054**	**J**	0.023	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-192	ND		0.023	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-193	**0.23**	**C180**	0.046	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-194	**0.065**		0.023	0.0039	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-195	**0.023**		0.023	0.0042	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-196	**0.023**	**q**	0.023	0.0014	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1

Client Sample ID: PDI-ST-T07B-1810
Date Collected: 10/31/18 17:05
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-4
Matrix: Solid
Percent Solids: 21.7

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.023	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-198	**0.080**	**C**	0.046	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-199	**0.080**	**C198**	0.046	0.0015	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-200	**0.0069**	**J q**	0.023	0.00097	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-201	**0.0084**	**J**	0.023	0.0010	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-202	**0.020**	**J**	0.023	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-203	**0.044**		0.023	0.0013	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-204	ND		0.023	0.0011	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-205	ND		0.023	0.0033	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-206	**0.046**		0.023	0.0062	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-207	ND		0.023	0.0044	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-208	**0.013**	**J q**	0.023	0.0045	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1
PCB-209	**0.065**		0.023	0.0032	ng/g	☼	11/12/18 10:55	11/28/18 07:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*60*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-3L	*62*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-4L	*75*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-15L	*79*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-19L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-37L	*89*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-54L	*49*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-77L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-81L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-104L	*83*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-105L	*89*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-114L	*90*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-118L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-123L	*88*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-126L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-155L	*84*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-156L	*83*	*C*	*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-157L	*83*	*C156*	*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-167L	*91*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-169L	*94*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-170L	*85*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-188L	*93*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-189L	*81*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-202L	*105*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-205L	*76*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-206L	*87*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-208L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-209L	*86*		*30 - 140*	*11/12/18 10:55*	*11/28/18 07:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*94*		*40 - 125*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-111L	*90*		*40 - 125*	*11/12/18 10:55*	*11/28/18 07:48*	*1*
PCB-178L	*99*		*40 - 125*	*11/12/18 10:55*	*11/28/18 07:48*	*1*

Client Sample ID: PDI-RB-ST-1810
Date Collected: 10/31/18 17:25
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-5
Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.041	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-2	**0.0044**	**J B**	0.041	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-3	**0.0027**	**J B q**	0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-4	ND		0.062	0.0075	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-5	ND		0.041	0.0070	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-6	ND		0.041	0.0062	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-7	ND		0.041	0.0063	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-8	**0.0066**	**J q**	0.062	0.0057	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-9	ND		0.041	0.0065	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-10	ND		0.041	0.0069	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-11	**0.021**	**J B q**	0.062	0.0060	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-12	ND	C	0.083	0.0063	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-13	ND	C12	0.083	0.0063	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-14	ND		0.041	0.0053	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-15	ND		0.041	0.0075	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-16	**0.0025**	**J q**	0.041	0.00085	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-17	**0.0032**	**J B q**	0.041	0.00076	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-18	**0.011**	**J C B**	0.083	0.00067	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-19	**0.0019**	**J**	0.041	0.00093	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-20	**0.0067**	**J C**	0.083	0.00086	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-21	ND	C	0.083	0.00084	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-22	**0.0020**	**J q**	0.041	0.00088	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-23	ND		0.041	0.00087	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-24	ND		0.041	0.00064	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-25	ND		0.041	0.00079	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-26	ND	C	0.083	0.00084	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-27	ND		0.041	0.00056	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-28	**0.0067**	**J C20**	0.083	0.00086	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-29	ND	C26	0.083	0.00084	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-30	**0.011**	**J C18 B**	0.083	0.00067	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-31	**0.0035**	**J B**	0.041	0.00084	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-32	**0.0038**	**J B q**	0.041	0.00053	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-33	ND	C21	0.083	0.00084	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-34	ND		0.041	0.00090	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-35	ND		0.041	0.00088	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-36	ND		0.041	0.00084	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-37	ND		0.041	0.00087	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-38	ND		0.041	0.00091	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-39	ND		0.041	0.00081	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-40	ND	C	0.12	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-41	ND	C40	0.12	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-42	ND		0.041	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-43	ND	C	0.083	0.0013	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-44	**0.011**	**J C B q**	0.12	0.0012	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-45	ND	C	0.083	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-46	ND		0.041	0.0017	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-47	**0.011**	**J B C44 q**	0.12	0.0012	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-48	ND		0.041	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-49	ND	C	0.083	0.0011	ng/L		11/15/18 12:24	11/28/18 14:31	1

Client Sample ID: PDI-RB-ST-1810
Date Collected: 10/31/18 17:25
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-5
Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	ND	C	0.083	0.0013	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-51	ND	C45	0.083	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-52	**0.0047**	**J B q**	0.041	0.0013	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-53	ND	C50	0.083	0.0013	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-54	ND		0.041	0.00042	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-55	ND		0.041	0.00099	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-56	**0.0020**	**J B q**	0.041	0.00099	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-57	ND		0.041	0.0010	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-58	ND		0.041	0.0010	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-59	ND	C	0.12	0.00096	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-60	ND		0.041	0.0010	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-61	**0.0046**	**J C B**	0.17	0.00095	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-62	ND	C59	0.12	0.00096	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-63	ND		0.041	0.00092	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-64	**0.0017**	**J q**	0.041	0.00091	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-65	**0.011**	**J B C44 q**	0.12	0.0012	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-66	**0.0039**	**J B**	0.041	0.00094	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-67	ND		0.041	0.00087	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-68	ND		0.041	0.00089	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-69	ND	C49	0.083	0.0011	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-70	**0.0046**	**J C61 B**	0.17	0.00095	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-71	ND	C40	0.12	0.0014	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-72	ND		0.041	0.00099	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-73	ND	C43	0.083	0.0013	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-74	**0.0046**	**J C61 B**	0.17	0.00095	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-75	ND	C59	0.12	0.00096	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-76	**0.0046**	**J C61 B**	0.17	0.00095	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-77	ND		0.041	0.0010	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-78	ND		0.041	0.0010	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-79	ND		0.041	0.00088	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-80	ND		0.041	0.00087	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-81	ND		0.041	0.00089	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-82	ND		0.041	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-83	**0.0043**	**J C B**	0.083	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-84	**0.0024**	**J B q**	0.041	0.00037	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-85	ND	C	0.12	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-86	**0.0034**	**J C B q**	0.25	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-87	**0.0034**	**J B C86 q**	0.25	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-88	**0.0019**	**J C q**	0.083	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-89	ND		0.041	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-90	**0.0082**	**J C B**	0.12	0.00028	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-91	**0.0019**	**J C88 q**	0.083	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-92	ND		0.041	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-93	ND	C	0.083	0.00032	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-94	ND		0.041	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-95	**0.0086**	**J**	0.041	0.00034	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-96	ND		0.041	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-97	**0.0034**	**J B C86 q**	0.25	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-98	ND	C	0.083	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1

Client Sample ID: PDI-RB-ST-1810
Date Collected: 10/31/18 17:25
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-5
Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	**0.0043**	**J C83 B**	0.083	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-100	ND	C93	0.083	0.00032	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-101	**0.0082**	**J B C90**	0.12	0.00028	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-102	ND	C98	0.083	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-103	ND		0.041	0.00032	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-104	ND		0.041	0.00024	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-105	**0.0020**	**J**	0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-106	ND		0.041	0.00049	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-107	ND		0.041	0.00052	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-108	ND	C	0.083	0.00050	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-109	**0.0034**	**J B C86 q**	0.25	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-110	**0.0074**	**J C B**	0.083	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-111	ND		0.041	0.00022	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-112	ND		0.041	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-113	**0.0082**	**J B C90**	0.12	0.00028	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-114	ND		0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-115	**0.0074**	**J B C110**	0.083	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-116	ND	C85	0.12	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-117	ND	C85	0.12	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-118	**0.0032**	**J B**	0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-119	**0.0034**	**J B C86 q**	0.25	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-120	ND		0.041	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-121	ND		0.041	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-122	ND		0.041	0.00056	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-123	ND		0.041	0.00049	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-124	ND	C108	0.083	0.00050	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-125	**0.0034**	**J B C86 q**	0.25	0.00027	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-126	ND		0.041	0.00055	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-127	ND		0.041	0.00048	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-128	ND	C	0.083	0.00035	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-129	**0.0032**	**J C B q**	0.17	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-130	ND		0.041	0.00048	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-131	ND		0.041	0.00050	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-132	ND		0.041	0.00046	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-133	ND		0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-134	ND	C	0.083	0.00047	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-135	**0.0018**	**J C q**	0.083	0.00024	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-136	ND		0.041	0.00017	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-137	ND		0.041	0.00041	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-138	**0.0032**	**J B C129 q**	0.17	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-139	ND	C	0.083	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-140	ND	C139	0.083	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-141	**0.0022**	**J**	0.041	0.00042	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-142	ND		0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-143	ND	C134	0.083	0.00047	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-144	ND		0.041	0.00022	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-145	ND		0.041	0.00016	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-146	ND		0.041	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-147	**0.0029**	**J C B q**	0.083	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1

Client Sample ID: PDI-RB-ST-1810
Date Collected: 10/31/18 17:25
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-5
Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.041	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-149	**0.0029**	**J B C147 q**	0.083	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-150	ND		0.041	0.00016	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-151	**0.0018**	**J C135 q**	0.083	0.00024	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-152	ND		0.041	0.00017	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-153	**0.0030**	**J C B**	0.083	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-154	ND		0.041	0.00019	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-155	ND		0.041	0.00016	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-156	**0.00059**	**J C q**	0.083	0.00038	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-157	**0.00059**	**J C156 q**	0.083	0.00038	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-158	ND		0.041	0.00028	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-159	ND		0.041	0.00030	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-160	**0.0032**	**J B C129 q**	0.17	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-161	ND		0.041	0.00030	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-162	ND		0.041	0.00029	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-163	**0.0032**	**J B C129 q**	0.17	0.00036	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-164	ND		0.041	0.00032	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-165	ND		0.041	0.00034	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-166	ND	C128	0.083	0.00035	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-167	ND		0.041	0.00022	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-168	**0.0030**	**J B C153**	0.083	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-169	ND		0.041	0.00024	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-170	ND		0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-171	ND	C	0.083	0.00046	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-172	ND		0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-173	ND	C171	0.083	0.00046	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-174	ND		0.041	0.00043	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-175	ND		0.041	0.00041	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-176	ND		0.041	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-177	ND		0.041	0.00044	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-178	ND		0.041	0.00045	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-179	ND		0.041	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-180	**0.0024**	**J C B**	0.083	0.00034	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-181	ND		0.041	0.00041	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-182	ND		0.041	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-183	**0.0026**	**J C B**	0.083	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-184	ND		0.041	0.00034	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-185	**0.0026**	**J B C183**	0.083	0.00040	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-186	ND		0.041	0.00033	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-187	ND		0.041	0.00038	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-188	ND		0.041	0.00030	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-189	ND		0.041	0.00082	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-190	ND		0.041	0.00030	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-191	ND		0.041	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-192	ND		0.041	0.00035	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-193	**0.0024**	**J C180 B**	0.083	0.00034	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-194	ND		0.041	0.0012	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-195	ND		0.041	0.0013	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-196	ND		0.041	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1

Client Sample ID: PDI-RB-ST-1810
Date Collected: 10/31/18 17:25
Date Received: 11/02/18 14:00

Lab Sample ID: 580-81511-5
Matrix: Water

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.041	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-198	ND	C	0.083	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-199	ND	C198	0.083	0.00031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-200	ND		0.041	0.00021	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-201	ND		0.041	0.00021	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-202	ND		0.041	0.00024	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-203	ND		0.041	0.00028	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-204	ND		0.041	0.00023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-205	ND		0.041	0.0010	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-206	ND		0.041	0.0031	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-207	ND		0.041	0.0023	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-208	ND		0.041	0.0024	ng/L		11/15/18 12:24	11/28/18 14:31	1
PCB-209	ND		0.041	0.0018	ng/L		11/15/18 12:24	11/28/18 14:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*58*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-3L	*58*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-4L	*71*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-15L	*75*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-19L	*73*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-37L	*89*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-54L	*49*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-77L	*89*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-81L	*87*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-104L	*59*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-105L	*89*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-114L	*85*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-118L	*87*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-123L	*82*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-126L	*84*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-155L	*66*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-156L	*84*	*C*	*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-157L	*84*	*C156*	*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-167L	*84*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-169L	*86*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-170L	*82*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-188L	*73*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-189L	*74*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-202L	*98*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-205L	*73*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-206L	*87*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-208L	*83*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-209L	*90*		*30 - 140*	*11/15/18 12:24*	*11/28/18 14:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-28L	*100*		*40 - 125*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-111L	*92*		*40 - 125*	*11/15/18 12:24*	*11/28/18 14:31*	*1*
PCB-178L	*100*		*40 - 125*	*11/15/18 12:24*	*11/28/18 14:31*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Lab Sample ID: MB 140-25296/11-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25296

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.010	0.000088	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-2	ND		0.010	0.00010	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-3	ND		0.010	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-4	ND		0.020	0.0020	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-5	ND		0.010	0.0017	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-6	ND		0.010	0.0015	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-7	ND		0.010	0.0015	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-8	ND		0.020	0.0014	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-9	ND		0.010	0.0016	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-10	ND		0.010	0.0017	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-11	ND		0.020	0.0015	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-12	ND	C	0.020	0.0015	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-13	ND	C12	0.020	0.0015	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-14	ND		0.010	0.0013	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-15	ND		0.010	0.0017	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-16	ND		0.010	0.00014	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-17	ND		0.010	0.00013	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-18	ND	C	0.020	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-19	ND		0.010	0.00015	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-20	0.000874	J q C	0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-21	0.000605	J q C	0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-22	ND		0.010	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-23	ND		0.010	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-24	ND		0.010	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-25	ND		0.010	0.00017	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-26	ND	C	0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-27	ND		0.010	0.000091	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-28	0.000874	J q C20	0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-29	ND	C26	0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-30	ND	C18	0.020	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-31	ND		0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-32	ND		0.010	0.000087	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-33	0.000605	J q C21	0.020	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-34	ND		0.010	0.00019	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-35	ND		0.010	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-36	ND		0.010	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-37	ND		0.010	0.00018	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-38	ND		0.010	0.00019	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-39	ND		0.010	0.00017	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-40	ND	C	0.030	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-41	ND	C40	0.030	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-42	ND		0.010	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-43	ND	C	0.020	0.00034	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-44	0.00205	J C	0.030	0.00032	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-45	ND	C	0.020	0.00038	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-46	ND		0.010	0.00046	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-47	0.00205	J C44	0.030	0.00032	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-48	ND		0.010	0.00036	ng/g		11/12/18 10:55	11/27/18 15:09	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25296/11-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25296

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	ND	C	0.020	0.00030	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-50	ND	C	0.020	0.00035	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-51	ND	C45	0.020	0.00038	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-52	ND		0.010	0.00036	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-53	ND	C50	0.020	0.00035	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-54	ND		0.010	0.000022	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-55	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-56	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-57	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-58	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-59	ND	C	0.030	0.00026	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-60	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-61	0.000571	J q C	0.040	0.00025	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-62	ND	C59	0.030	0.00026	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-63	ND		0.010	0.00025	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-64	ND		0.010	0.00024	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-65	0.00205	J C44	0.030	0.00032	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-66	0.00100	J q	0.010	0.00025	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-67	ND		0.010	0.00023	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-68	ND		0.010	0.00024	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-69	ND	C49	0.020	0.00030	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-70	0.000571	J q C61	0.040	0.00025	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-71	ND	C40	0.030	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-72	ND		0.010	0.00026	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-73	ND	C43	0.020	0.00034	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-74	0.000571	J q C61	0.040	0.00025	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-75	ND	C59	0.030	0.00026	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-76	0.000571	J q C61	0.040	0.00025	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-77	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-78	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-79	ND		0.010	0.00024	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-80	ND		0.010	0.00023	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-81	ND		0.010	0.00024	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-82	ND		0.010	0.000068	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-83	ND	C	0.020	0.000062	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-84	ND		0.010	0.000069	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-85	ND	C	0.030	0.000050	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-86	ND	C	0.060	0.000051	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-87	ND	C86	0.060	0.000051	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-88	ND	C	0.020	0.000062	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-89	ND		0.010	0.000067	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-90	0.000896	J q C	0.030	0.000052	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-91	ND	C88	0.020	0.000062	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-92	ND		0.010	0.000058	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-93	ND	C	0.020	0.000059	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-94	ND		0.010	0.000067	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-95	0.000344	J	0.010	0.000064	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-96	ND		0.010	0.000050	ng/g		11/12/18 10:55	11/27/18 15:09	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25296/11-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25296

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	ND	C86	0.060	0.000051	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-98	ND	C	0.020	0.000057	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-99	ND	C83	0.020	0.000062	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-100	ND	C93	0.020	0.000059	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-101	0.000896	J q C90	0.030	0.000052	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-102	ND	C98	0.020	0.000057	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-103	ND		0.010	0.000059	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-104	ND		0.010	0.000045	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-105	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-106	ND		0.010	0.00028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-107	ND		0.010	0.00030	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-108	ND	C	0.020	0.00029	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-109	ND	C86	0.060	0.000051	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-110	0.000484	J q C	0.020	0.000043	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-111	ND		0.010	0.000041	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-112	ND		0.010	0.000044	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-113	0.000896	J q C90	0.030	0.000052	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-114	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-115	0.000484	J q C110	0.020	0.000043	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-116	ND	C85	0.030	0.000050	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-117	ND	C85	0.030	0.000050	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-118	ND		0.010	0.00026	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-119	ND	C86	0.060	0.000051	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-120	ND		0.010	0.000042	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-121	ND		0.010	0.000043	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-122	ND		0.010	0.00032	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-123	ND		0.010	0.00028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-124	ND	C108	0.020	0.00029	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-125	ND	C86	0.060	0.000051	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-126	ND		0.010	0.00031	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-127	ND		0.010	0.00028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-128	ND	C	0.020	0.00032	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-129	0.00107	J q C	0.040	0.00034	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-130	ND		0.010	0.00044	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-131	ND		0.010	0.00046	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-132	ND		0.010	0.00043	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-133	ND		0.010	0.00042	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-134	ND	C	0.020	0.00044	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-135	ND	C	0.020	0.000043	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-136	ND		0.010	0.000031	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-137	ND		0.010	0.00038	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-138	0.00107	J q C129	0.040	0.00034	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-139	ND	C	0.020	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-140	ND	C139	0.020	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-141	ND		0.010	0.00039	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-142	ND		0.010	0.00042	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-143	ND	C134	0.020	0.00044	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-144	ND		0.010	0.000039	ng/g		11/12/18 10:55	11/27/18 15:09	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25296/11-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25296

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.010	0.000029	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-146	ND		0.010	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-147	ND	C	0.020	0.00042	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-148	ND		0.010	0.000041	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-149	ND	C147	0.020	0.00042	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-150	ND		0.010	0.000028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-151	ND	C135	0.020	0.000043	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-152	ND		0.010	0.000030	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-153	ND	C	0.020	0.00029	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-154	ND		0.010	0.000033	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-155	ND		0.010	0.000028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-156	ND	C	0.020	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-157	ND	C156	0.020	0.00037	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-158	ND		0.010	0.00026	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-159	ND		0.010	0.00028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-160	0.00107	J q C129	0.040	0.00034	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-161	ND		0.010	0.00028	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-162	ND		0.010	0.00027	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-163	0.00107	J q C129	0.040	0.00034	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-164	ND		0.010	0.00029	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-165	ND		0.010	0.00031	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-166	ND	C128	0.020	0.00032	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-167	0.000387	J	0.010	0.00020	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-168	ND	C153	0.020	0.00029	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-169	ND		0.010	0.00022	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-170	ND		0.010	0.000090	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-171	ND	C	0.020	0.000087	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-172	ND		0.010	0.000086	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-173	ND	C171	0.020	0.000087	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-174	ND		0.010	0.000081	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-175	ND		0.010	0.000078	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-176	ND		0.010	0.000059	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-177	ND		0.010	0.000083	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-178	ND		0.010	0.000085	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-179	ND		0.010	0.000062	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-180	ND	C	0.020	0.000065	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-181	ND		0.010	0.000078	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-182	ND		0.010	0.000075	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-183	ND	C	0.020	0.000076	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-184	ND		0.010	0.000064	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-185	ND	C183	0.020	0.000076	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-186	ND		0.010	0.000062	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-187	ND		0.010	0.000072	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-188	ND		0.010	0.000055	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-189	ND		0.010	0.00031	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-190	ND		0.010	0.000056	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-191	ND		0.010	0.000059	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-192	ND		0.010	0.000066	ng/g		11/12/18 10:55	11/27/18 15:09	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25296/11-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25296

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	ND	C180	0.020	0.000065	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-194	ND		0.010	0.00070	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-195	ND		0.010	0.00077	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-196	ND		0.010	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-197	ND		0.010	0.000085	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-198	ND	C	0.020	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-199	ND	C198	0.020	0.00011	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-200	ND		0.010	0.000076	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-201	ND		0.010	0.000078	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-202	ND		0.010	0.000087	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-203	ND		0.010	0.00010	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-204	ND		0.010	0.000086	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-205	ND		0.010	0.00059	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-206	ND		0.010	0.0013	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-207	ND		0.010	0.00093	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-208	ND		0.010	0.00097	ng/g		11/12/18 10:55	11/27/18 15:09	1
PCB-209	ND		0.010	0.00088	ng/g		11/12/18 10:55	11/27/18 15:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*53*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-3L	*53*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-4L	*68*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-15L	*65*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-19L	*76*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-37L	*75*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-54L	*48*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-77L	*78*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-81L	*77*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-104L	*71*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-105L	*87*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-114L	*86*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-118L	*86*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-123L	*84*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-126L	*84*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-155L	*83*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-156L	*87*	*C*	*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-157L	*87*	*C156*	*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-167L	*87*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-169L	*92*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-170L	*86*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-188L	*86*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-189L	*76*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-202L	*107*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-205L	*75*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-206L	*89*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-208L	*88*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*
PCB-209L	*96*		*30 - 140*	*11/12/18 10:55*	*11/27/18 15:09*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25296/11-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25296

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	87		40 - 125	11/12/18 10:55	11/27/18 15:09	1
PCB-111L	88		40 - 125	11/12/18 10:55	11/27/18 15:09	1
PCB-178L	96		40 - 125	11/12/18 10:55	11/27/18 15:09	1

Lab Sample ID: LCS 140-25296/12-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25296

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	0.500	0.401		ng/g		80	50 - 150
PCB-3	0.500	0.424		ng/g		85	50 - 150
PCB-4	0.500	0.447		ng/g		89	50 - 150
PCB-15	0.500	0.488		ng/g		98	50 - 150
PCB-19	0.500	0.531		ng/g		106	50 - 150
PCB-37	0.500	0.497		ng/g		99	50 - 150
PCB-54	0.500	0.561		ng/g		112	50 - 150
PCB-77	0.500	0.454		ng/g		91	50 - 150
PCB-81	0.500	0.453		ng/g		91	50 - 150
PCB-104	0.500	0.506		ng/g		101	50 - 150
PCB-105	0.500	0.499		ng/g		100	50 - 150
PCB-114	0.500	0.537		ng/g		107	50 - 150
PCB-118	0.500	0.520		ng/g		104	50 - 150
PCB-123	0.500	0.562		ng/g		112	50 - 150
PCB-126	0.500	0.528		ng/g		106	50 - 150
PCB-155	0.500	0.517		ng/g		103	50 - 150
PCB-156	1.00	0.997	C	ng/g		100	50 - 150
PCB-157	1.00	0.997	C156	ng/g		100	50 - 150
PCB-167	0.500	0.506		ng/g		101	50 - 150
PCB-169	0.500	0.446		ng/g		89	50 - 150
PCB-188	0.500	0.498		ng/g		100	50 - 150
PCB-189	0.500	0.511		ng/g		102	50 - 150
PCB-202	0.500	0.455		ng/g		91	50 - 150
PCB-205	0.500	0.557		ng/g		111	50 - 150
PCB-206	0.500	0.486		ng/g		97	50 - 150
PCB-208	0.500	0.499		ng/g		100	50 - 150
PCB-209	0.500	0.521		ng/g		104	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	54		30 - 140
PCB-3L	53		30 - 140
PCB-4L	68		30 - 140
PCB-15L	68		30 - 140
PCB-19L	82		30 - 140
PCB-37L	76		30 - 140
PCB-54L	52		30 - 140
PCB-77L	81		30 - 140
PCB-81L	78		30 - 140
PCB-104L	72		30 - 140

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-25296/12-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25296

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-105L	87		30 - 140
PCB-114L	86		30 - 140
PCB-118L	86		30 - 140
PCB-123L	84		30 - 140
PCB-126L	83		30 - 140
PCB-155L	79		30 - 140
PCB-156L	88	C	30 - 140
PCB-157L	88	C156	30 - 140
PCB-167L	88		30 - 140
PCB-169L	92		30 - 140
PCB-170L	85		30 - 140
PCB-188L	84		30 - 140
PCB-189L	79		30 - 140
PCB-202L	104		30 - 140
PCB-205L	76		30 - 140
PCB-206L	90		30 - 140
PCB-208L	89		30 - 140
PCB-209L	93		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	88		40 - 125
PCB-111L	86		40 - 125
PCB-178L	96		40 - 125

Lab Sample ID: LCSD 140-25296/13-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25296

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1			0.500	0.395		ng/g		79	50 - 150	1	50
PCB-3			0.500	0.407		ng/g		81	50 - 150	4	50
PCB-4			0.500	0.442		ng/g		88	50 - 150	1	50
PCB-15			0.500	0.476		ng/g		95	50 - 150	3	50
PCB-19			0.500	0.531		ng/g		106	50 - 150	0	50
PCB-37			0.500	0.494		ng/g		99	50 - 150	1	50
PCB-54			0.500	0.571		ng/g		114	50 - 150	2	50
PCB-77			0.500	0.459		ng/g		92	50 - 150	1	50
PCB-81			0.500	0.435		ng/g		87	50 - 150	4	50
PCB-104			0.500	0.508		ng/g		102	50 - 150	0	50
PCB-105			0.500	0.497		ng/g		99	50 - 150	0	50
PCB-114			0.500	0.528		ng/g		106	50 - 150	2	50
PCB-118			0.500	0.525		ng/g		105	50 - 150	1	50
PCB-123			0.500	0.549		ng/g		110	50 - 150	2	50
PCB-126			0.500	0.523		ng/g		105	50 - 150	1	50
PCB-155			0.500	0.505		ng/g		101	50 - 150	2	50
PCB-156			1.00	1.02	C	ng/g		102	50 - 150	2	50
PCB-157			1.00	1.02	C156	ng/g		102	50 - 150	2	50
PCB-167			0.500	0.491		ng/g		98	50 - 150	3	50

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 140-25296/13-B
Matrix: Solid
Analysis Batch: 25705

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25296

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-169			0.500	0.457		ng/g		91	50 - 150	3	50
PCB-188			0.500	0.507		ng/g		101	50 - 150	2	50
PCB-189			0.500	0.509		ng/g		102	50 - 150	0	50
PCB-202			0.500	0.454		ng/g		91	50 - 150	0	50
PCB-205			0.500	0.562		ng/g		112	50 - 150	1	50
PCB-206			0.500	0.470		ng/g		94	50 - 150	3	50
PCB-208			0.500	0.492		ng/g		98	50 - 150	1	50
PCB-209			0.500	0.517		ng/g		103	50 - 150	1	50

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
PCB-1L	*49*		*30 - 140*
PCB-3L	*49*		*30 - 140*
PCB-4L	*62*		*30 - 140*
PCB-15L	*62*		*30 - 140*
PCB-19L	*74*		*30 - 140*
PCB-37L	*70*		*30 - 140*
PCB-54L	*43*	*q*	*30 - 140*
PCB-77L	*76*		*30 - 140*
PCB-81L	*75*		*30 - 140*
PCB-104L	*65*		*30 - 140*
PCB-105L	*84*		*30 - 140*
PCB-114L	*83*		*30 - 140*
PCB-118L	*81*		*30 - 140*
PCB-123L	*80*		*30 - 140*
PCB-126L	*81*		*30 - 140*
PCB-155L	*75*		*30 - 140*
PCB-156L	*85*	*C*	*30 - 140*
PCB-157L	*85*	*C156*	*30 - 140*
PCB-167L	*85*		*30 - 140*
PCB-169L	*88*		*30 - 140*
PCB-170L	*82*		*30 - 140*
PCB-188L	*79*		*30 - 140*
PCB-189L	*74*		*30 - 140*
PCB-202L	*100*		*30 - 140*
PCB-205L	*72*		*30 - 140*
PCB-206L	*87*		*30 - 140*
PCB-208L	*85*		*30 - 140*
PCB-209L	*91*		*30 - 140*

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
PCB-28L	*81*		*40 - 125*
PCB-111L	*84*		*40 - 125*
PCB-178L	*92*		*40 - 125*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25438/11-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25438

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.040	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-2	0.00149	J	0.040	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-3	0.000814	J q	0.040	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-4	ND		0.060	0.0061	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-5	ND		0.040	0.0055	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-6	ND		0.040	0.0048	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-7	ND		0.040	0.0050	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-8	ND		0.060	0.0045	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-9	ND		0.040	0.0051	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-10	ND		0.040	0.0054	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-11	0.0123	J q	0.060	0.0047	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-12	ND	C	0.080	0.0049	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-13	ND	C12	0.080	0.0049	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-14	ND		0.040	0.0042	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-15	ND		0.040	0.0057	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-16	ND		0.040	0.00044	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-17	0.00119	J q	0.040	0.00039	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-18	0.000683	J C q	0.080	0.00035	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-19	ND		0.040	0.00048	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-20	ND	C	0.080	0.00068	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-21	0.00134	J C q	0.080	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-22	ND		0.040	0.00070	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-23	ND		0.040	0.00069	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-24	ND		0.040	0.00033	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-25	ND		0.040	0.00063	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-26	0.00104	J C q	0.080	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-27	ND		0.040	0.00029	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-28	ND	C20	0.080	0.00068	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-29	0.00104	J C26 q	0.080	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-30	0.000683	J C18 q	0.080	0.00035	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-31	0.00198	J q	0.040	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-32	0.00159	J q	0.040	0.00027	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-33	0.00134	J C21 q	0.080	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-34	ND		0.040	0.00072	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-35	ND		0.040	0.00070	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-36	ND		0.040	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-37	ND		0.040	0.00070	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-38	ND		0.040	0.00073	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-39	ND		0.040	0.00065	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-40	ND	C	0.12	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-41	ND	C40	0.12	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-42	ND		0.040	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-43	ND	C	0.080	0.0011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-44	0.00956	J C	0.12	0.0010	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-45	0.00210	J C q	0.080	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-46	ND		0.040	0.0015	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-47	0.00956	J C44	0.12	0.0010	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-48	ND		0.040	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25438/11-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25438

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	ND	C	0.080	0.00095	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-50	ND	C	0.080	0.0011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-51	0.00210	J C45 q	0.080	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-52	0.00237	J	0.040	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-53	ND	C50	0.080	0.0011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-54	ND		0.040	0.00012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-55	ND		0.040	0.00085	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-56	0.000858	J q	0.040	0.00085	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-57	ND		0.040	0.00086	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-58	ND		0.040	0.00087	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-59	ND	C	0.12	0.00082	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-60	ND		0.040	0.00086	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-61	0.00388	J C	0.16	0.00081	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-62	ND	C59	0.12	0.00082	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-63	ND		0.040	0.00079	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-64	ND		0.040	0.00078	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-65	0.00956	J C44	0.12	0.0010	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-66	0.00127	J q	0.040	0.00081	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-67	ND		0.040	0.00074	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-68	0.00167	J	0.040	0.00076	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-69	ND	C49	0.080	0.00095	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-70	0.00388	J C61	0.16	0.00081	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-71	ND	C40	0.12	0.0012	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-72	ND		0.040	0.00084	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-73	ND	C43	0.080	0.0011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-74	0.00388	J C61	0.16	0.00081	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-75	ND	C59	0.12	0.00082	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-76	0.00388	J C61	0.16	0.00081	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-77	ND		0.040	0.00085	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-78	ND		0.040	0.00087	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-79	ND		0.040	0.00075	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-80	ND		0.040	0.00074	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-81	ND		0.040	0.00076	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-82	ND		0.040	0.00022	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-83	0.00226	J C q	0.080	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-84	0.00141	J q	0.040	0.00022	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-85	ND	C	0.12	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-86	0.00303	J C	0.24	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-87	0.00303	J C86	0.24	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-88	ND	C	0.080	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-89	ND		0.040	0.00022	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-90	0.00388	J C	0.12	0.00017	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-91	ND	C88	0.080	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-92	ND		0.040	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-93	0.000567	J C q	0.080	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-94	ND		0.040	0.00022	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-95	ND		0.040	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-96	ND		0.040	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25438/11-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25438

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	0.00303	J C86	0.24	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-98	ND	C	0.080	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-99	0.00226	J C83 q	0.080	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-100	0.000567	J C93 q	0.080	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-101	0.00388	J C90	0.12	0.00017	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-102	ND	C98	0.080	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-103	ND		0.040	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-104	ND		0.040	0.00015	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-105	ND		0.040	0.00055	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-106	ND		0.040	0.00058	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-107	ND		0.040	0.00062	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-108	ND	C	0.080	0.00060	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-109	0.00303	J C86	0.24	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-110	0.00261	J C q	0.080	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-111	ND		0.040	0.00013	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-112	ND		0.040	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-113	0.00388	J C90	0.12	0.00017	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-114	ND		0.040	0.00053	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-115	0.00261	J C110 q	0.080	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-116	ND	C85	0.12	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-117	ND	C85	0.12	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-118	0.00164	J q	0.040	0.00053	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-119	0.00303	J C86	0.24	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-120	ND		0.040	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-121	ND		0.040	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-122	ND		0.040	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-123	ND		0.040	0.00059	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-124	ND	C108	0.080	0.00060	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-125	0.00303	J C86	0.24	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-126	ND		0.040	0.00066	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-127	ND		0.040	0.00058	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-128	ND	C	0.080	0.00057	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-129	0.00232	J C	0.16	0.00058	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-130	ND		0.040	0.00077	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-131	ND		0.040	0.00080	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-132	ND		0.040	0.00075	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-133	ND		0.040	0.00073	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-134	ND	C	0.080	0.00076	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-135	ND	C	0.080	0.00011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-136	ND		0.040	0.000080	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-137	ND		0.040	0.00066	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-138	0.00232	J C129	0.16	0.00058	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-139	ND	C	0.080	0.00065	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-140	ND	C139	0.080	0.00065	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-141	ND		0.040	0.00068	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-142	ND		0.040	0.00073	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-143	ND	C134	0.080	0.00076	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-144	ND		0.040	0.00010	ng/L		11/15/18 12:24	11/28/18 13:29	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25438/11-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25438

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.040	0.000076	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-146	ND		0.040	0.00064	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-147	0.00314	J C	0.080	0.00074	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-148	ND		0.040	0.00011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-149	0.00314	J C147	0.080	0.00074	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-150	ND		0.040	0.000073	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-151	ND	C135	0.080	0.00011	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-152	ND		0.040	0.000079	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-153	0.00169	J C q	0.080	0.00051	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-154	ND		0.040	0.000087	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-155	ND		0.040	0.000073	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-156	ND	C	0.080	0.00064	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-157	ND	C156	0.080	0.00064	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-158	ND		0.040	0.00046	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-159	ND		0.040	0.00049	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-160	0.00232	J C129	0.16	0.00058	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-161	ND		0.040	0.00048	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-162	ND		0.040	0.00048	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-163	0.00232	J C129	0.16	0.00058	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-164	ND		0.040	0.00051	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-165	ND		0.040	0.00055	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-166	ND	C128	0.080	0.00057	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-167	ND		0.040	0.00035	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-168	0.00169	J C153 q	0.080	0.00051	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-169	ND		0.040	0.00038	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-170	ND		0.040	0.00028	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-171	ND	C	0.080	0.00028	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-172	0.000442	J q	0.040	0.00028	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-173	ND	C171	0.080	0.00028	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-174	ND		0.040	0.00026	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-175	ND		0.040	0.00025	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-176	ND		0.040	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-177	ND		0.040	0.00027	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-178	ND		0.040	0.00027	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-179	ND		0.040	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-180	0.000909	J C q	0.080	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-181	ND		0.040	0.00025	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-182	ND		0.040	0.00024	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-183	0.000815	J C q	0.080	0.00025	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-184	ND		0.040	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-185	0.000815	J C183 q	0.080	0.00025	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-186	ND		0.040	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-187	ND		0.040	0.00023	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-188	ND		0.040	0.00018	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-189	ND		0.040	0.00067	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-190	0.000361	J q	0.040	0.00018	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-191	ND		0.040	0.00019	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-192	ND		0.040	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25438/11-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25438

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	0.000909	J C180 q	0.080	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-194	ND		0.040	0.0015	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-195	ND		0.040	0.0017	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-196	ND		0.040	0.00020	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-197	ND		0.040	0.00015	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-198	0.00158	J C	0.080	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-199	0.00158	J C198	0.080	0.00021	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-200	ND		0.040	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-201	ND		0.040	0.00014	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-202	ND		0.040	0.00016	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-203	0.00159	J q	0.040	0.00018	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-204	ND		0.040	0.00015	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-205	ND		0.040	0.0013	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-206	ND		0.040	0.0033	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-207	ND		0.040	0.0025	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-208	ND		0.040	0.0026	ng/L		11/15/18 12:24	11/28/18 13:29	1
PCB-209	ND		0.040	0.0021	ng/L		11/15/18 12:24	11/28/18 13:29	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
PCB-1L	*59*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-3L	*61*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-4L	*74*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-15L	*78*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-19L	*80*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-37L	*85*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-54L	*52*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-77L	*87*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-81L	*84*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-104L	*92*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-105L	*96*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-114L	*92*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-118L	*94*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-123L	*90*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-126L	*91*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-155L	*100*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-156L	*94*	*C*	*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-157L	*94*	*C156*	*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-167L	*95*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-169L	*100*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-170L	*92*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-188L	*87*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-189L	*81*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-202L	*106*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-205L	*81*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-206L	*99*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-208L	*94*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*
PCB-209L	*101*		*30 - 140*	*11/15/18 12:24*	*11/28/18 13:29*	*1*

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: MB 140-25438/11-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25438

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	97		40 - 125	11/15/18 12:24	11/28/18 13:29	1
PCB-111L	119		40 - 125	11/15/18 12:24	11/28/18 13:29	1
PCB-178L	102		40 - 125	11/15/18 12:24	11/28/18 13:29	1

Lab Sample ID: LCS 140-25438/12-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	0.803		ng/L		80	50 - 150
PCB-3	1.00	0.773		ng/L		77	50 - 150
PCB-4	1.00	0.858		ng/L		86	50 - 150
PCB-15	1.00	1.08		ng/L		108	50 - 150
PCB-19	1.00	1.13		ng/L		113	50 - 150
PCB-37	1.00	0.943		ng/L		94	50 - 150
PCB-54	1.00	1.17		ng/L		117	50 - 150
PCB-77	1.00	0.863		ng/L		86	50 - 150
PCB-81	1.00	0.872		ng/L		87	50 - 150
PCB-104	1.00	1.04		ng/L		104	50 - 150
PCB-105	1.00	0.956		ng/L		96	50 - 150
PCB-114	1.00	1.02		ng/L		102	50 - 150
PCB-118	1.00	0.994		ng/L		99	50 - 150
PCB-123	1.00	0.990		ng/L		99	50 - 150
PCB-126	1.00	1.00		ng/L		100	50 - 150
PCB-155	1.00	1.00		ng/L		100	50 - 150
PCB-156	2.00	1.94	C	ng/L		97	50 - 150
PCB-157	2.00	1.94	C156	ng/L		97	50 - 150
PCB-167	1.00	0.966		ng/L		97	50 - 150
PCB-169	1.00	0.864		ng/L		86	50 - 150
PCB-188	1.00	0.958		ng/L		96	50 - 150
PCB-189	1.00	0.947		ng/L		95	50 - 150
PCB-202	1.00	0.863		ng/L		86	50 - 150
PCB-205	1.00	1.07		ng/L		107	50 - 150
PCB-206	1.00	0.903		ng/L		90	50 - 150
PCB-208	1.00	0.931		ng/L		93	50 - 150
PCB-209	1.00	0.978		ng/L		98	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	51		30 - 140
PCB-3L	58		30 - 140
PCB-4L	66		30 - 140
PCB-15L	74		30 - 140
PCB-19L	78		30 - 140
PCB-37L	88		30 - 140
PCB-54L	53		30 - 140
PCB-77L	91		30 - 140
PCB-81L	89		30 - 140
PCB-104L	72		30 - 140

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 140-25438/12-A
Matrix: Water
Analysis Batch: 25743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25438

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-105L	95		30 - 140
PCB-114L	92		30 - 140
PCB-118L	92		30 - 140
PCB-123L	88		30 - 140
PCB-126L	89		30 - 140
PCB-155L	79		30 - 140
PCB-156L	91	C	30 - 140
PCB-157L	91	C156	30 - 140
PCB-167L	92		30 - 140
PCB-169L	96		30 - 140
PCB-170L	90		30 - 140
PCB-188L	86		30 - 140
PCB-189L	84		30 - 140
PCB-202L	106		30 - 140
PCB-205L	81		30 - 140
PCB-206L	95		30 - 140
PCB-208L	95		30 - 140
PCB-209L	101		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	96		40 - 125
PCB-111L	89		40 - 125
PCB-178L	96		40 - 125

Lab Chronicle

Client: AECOM
Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-81511-3

Client Sample ID: PDI-ST-T06B-1810
Lab Sample ID: 580-81511-1
Date Collected: 10/31/18 09:45
Matrix: Solid
Date Received: 11/02/18 14:00
Percent Solids: 28.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			25296	11/12/18 10:55	CLI	TAL KNX
Total/NA	Cleanup	Split			25395	11/14/18 15:05	ALS	TAL KNX
Total/NA	Analysis	1668A		1	25734	11/28/18 04:43	LKM	TAL KNX

Client Sample ID: PDI-ST-T06A-1810
Lab Sample ID: 580-81511-2
Date Collected: 10/31/18 10:05
Matrix: Solid
Date Received: 11/02/18 14:00
Percent Solids: 23.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			25296	11/12/18 10:55	CLI	TAL KNX
Total/NA	Cleanup	Split			25395	11/14/18 15:05	ALS	TAL KNX
Total/NA	Analysis	1668A		1	25734	11/28/18 05:45	LKM	TAL KNX

Client Sample ID: PDI-ST-T07A-1810
Lab Sample ID: 580-81511-3
Date Collected: 10/31/18 16:55
Matrix: Solid
Date Received: 11/02/18 14:00
Percent Solids: 19.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			25296	11/12/18 10:55	CLI	TAL KNX
Total/NA	Cleanup	Split			25395	11/14/18 15:05	ALS	TAL KNX
Total/NA	Analysis	1668A		1	25734	11/28/18 06:46	LKM	TAL KNX

Client Sample ID: PDI-ST-T07B-1810
Lab Sample ID: 580-81511-4
Date Collected: 10/31/18 17:05
Matrix: Solid
Date Received: 11/02/18 14:00
Percent Solids: 21.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			25296	11/12/18 10:55	CLI	TAL KNX
Total/NA	Cleanup	Split			25395	11/14/18 15:05	ALS	TAL KNX
Total/NA	Analysis	1668A		1	25734	11/28/18 07:48	LKM	TAL KNX

Client Sample ID: PDI-RB-ST-1810
Lab Sample ID: 580-81511-5
Date Collected: 10/31/18 17:25
Matrix: Water
Date Received: 11/02/18 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			25438	11/15/18 12:24	SMA	TAL KNX
Total/NA	Analysis	1668A		1	25743	11/28/18 14:31	JMN	TAL KNX

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: AECOM
Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-81511-3

Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-19
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Nevada	State Program	9	WA000502019-1	07-31-19
Oregon	NELAP	10	WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-19

Laboratory: TestAmerica Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		N/A	
ANAB	DoD ELAP		L2311	02-13-19
Arkansas DEQ	State Program	6	88-0688	06-16-19
California	State Program	9	2423	06-30-19
Colorado	State Program	8	TN00009	02-28-19
Connecticut	State Program	1	PH-0223	09-30-19
Florida	NELAP	4	E87177	06-30-19
Georgia	State Program	4	906	04-13-20
Hawaii	State Program	9	N/A	04-13-19
Kansas	NELAP	7	E-10349	10-31-19
Kentucky (DW)	State Program	4	90101	12-31-18
Louisiana	NELAP	6	83979	06-30-19
Louisiana (DW)	NELAP	6	LA160005	12-31-18
Maryland	State Program	3	277	03-31-19
Michigan	State Program	5	9933	04-13-20
Nevada	State Program	9	TN00009	07-31-19
New Jersey	NELAP	2	TN001	06-30-19
New York	NELAP	2	10781	03-31-19
North Carolina (DW)	State Program	4	21705	07-31-19
North Carolina (WW/SW)	State Program	4	64	12-31-18
Ohio VAP	State Program	5	CL0059	08-28-20
Oklahoma	State Program	6	9415	08-31-19
Oregon	NELAP	10	TNI0189	01-01-19
Pennsylvania	NELAP	3	68-00576	12-31-18
Tennessee	State Program	4	2014	04-13-20
Texas	NELAP	6	T104704380-16-9	08-31-19
US Fish & Wildlife	Federal		LE-058448-0	07-31-19
USDA	Federal		P330-16-00262	08-20-19
Utah	NELAP	8	TN00009	07-31-19
Virginia	NELAP	3	460176	09-14-19
Washington	State Program	10	C593	01-19-19
West Virginia (DW)	State Program	3	9955C	12-31-18
West Virginia DEP	State Program	3	345	04-30-19
Wisconsin	State Program	5	998044300	08-31-19

Sample Summary

Client: AECOM
Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-81511-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-81511-1	PDI-ST-T06B-1810	Solid	10/31/18 09:45	11/02/18 14:00
580-81511-2	PDI-ST-T06A-1810	Solid	10/31/18 10:05	11/02/18 14:00
580-81511-3	PDI-ST-T07A-1810	Solid	10/31/18 16:55	11/02/18 14:00
580-81511-4	PDI-ST-T07B-1810	Solid	10/31/18 17:05	11/02/18 14:00
580-81511-5	PDI-RB-ST-1810	Water	10/31/18 17:25	11/02/18 14:00

580-81511 Chain of Custody

SURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010** **Analysis Turnaround Time** Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date: 11/01/2018** **Carrier: courier**
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study			COC No: 1 of 1 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-ST-T06B-1810	10/31/2018	9:45	Sed			6		X	X	X	X	X	X						
PDI-ST-T06A-1810	10/31/2018	10:05	Sed	MS/MSD		8		X	X	X	X	X	X						
PDI-ST-T07A-1810	10/31/2018	16:55	Sed			6		X	X	X	X	X	X						
PDI-ST-T07B-1810	10/31/2018	17:05	Sed			6		X	X	X	X	X	X						
PDI-RB-ST-1810	10/31/2018	17:25	W		NM	8								X	X	X	X	X	

Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column

Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid

Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☒ Archive For 12 Months

Special Instructions/QC Requirements & Comments:

34,253

Relinquished by:	Company: AECOM	Date/Time: 11/01/18 1326	Received by:	Company: M.E.	Date/Time: 11/1/18 1326
Relinquished by:	Company: M.E.	Date/Time: 11/1/18 1400	Received by:	Company: TAPOR	Date/Time: 11/1/18 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

580-81511 Chain of Custody

SURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle	Project Contact: Amy Dahl / Chelsey Cook	Site Contact: Jennifer Ray / Michaela McCoog	Date: 11/01/2018	COC No:
5755-8th-Street-East	Tel: (206) 438-2261 / (206) 438-2010	Laboratory Contact: Elaine-Walker	Carrier: courier	1 of 1 COCs
Tacoma, WA 98424-1317	Analysis Turnaround Time			
Ph: 253-922-2310 Fax: 253-922-5047	Calendar (C) or Work Days (W) _____			
Client Contact	☐ 21 days			
AECOM	☐ Other _____			
1111 3rd Ave Suite 1600				
Seattle, WA 98101				
Phone: (206) 438-2700 Fax: 1+(866) 495-5288				
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling				
Portland, OR				
Project #: 60566335 Study: Study				

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-ST-T06B-1810	10/31/2018	9:45	Sed			6		X	X	X	X	X	X						
PDI-ST-T06A-1810	10/31/2018	10:05	Sed	MS/MSD		8		X	X	X	X	X	X						
PDI-ST-T07A-1810	10/31/2018	16:55	Sed			6		X	X	X	X	X	X						
PDI-ST-T07B-1810	10/31/2018	17:05	Sed			6		X	X	X	X	X	X						
PDI-RB-ST-1810	10/31/2018	17:25	W		NM	8								X	X	X	X	X	

Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column

Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid

Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☒ Archive For 12 Months

Special Instructions/QC Requirements & Comments:

34,253

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	AECOM	11/01/18 1326		M.E.	11/1/18 1326
	M.E.	11/1/18 1400		TAPOR	11/1/18 1400
	TAPOR	11/2/18 1100		TASEQ	11-3-18 1111

4=1.4

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

580-81511 Chain of Custody

TestAmerica — LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Walker, Elaine M	No: 60975.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: elaine.walker@testamericainc.com	State of Origin: Oregon
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Page: Page 1 of 1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 11/21/2018		Job #: 580-81511-1
City: Knoxville	TAT Requested (days):		
State, Zip: TN, 37921			
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:		
Email:	WO #:		
Project Name: Portland Harbor Pre-Remedial Design	Project #: 58012120		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1668A/1668_P_Sox (MOD) 209 PCBs plus Totals	1668A/1668_Split (MOD) 209 PCBs plus Totals	Screen_1668/Screen_PCB_P_S	1668A/1668_P_Sep (MOD) 209 PCBs plus Totals	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
PDI-ST-T06B-1810 (580-81511-1)	10/31/18	09:45 Pacific		Solid			X	X	X		1	
PDI-ST-T06A-1810 (580-81511-2)	10/31/18	10:05 Pacific		Solid			X	X	X		1	
PDI-ST-T07A-1810 (580-81511-3)	10/31/18	16:55 Pacific		Solid			X	X	X		1	
PDI-ST-T07B-1810 (580-81511-4)	10/31/18	17:05 Pacific		Solid			X	X	X		1	
PDI-RB-ST-1810 (580-81511-5)	10/31/18	17:25 Pacific		Water						X	2	

RT: 0.9°C CT: 1.0°C, 1 cooler
RC-ND, Custody seal intact
Trk#4611 5676 4980, KW 11/3/18

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 11/2/18 1330	Company TAER	Received by:	Date/Time: 11/3/18 1000	Company TA-Knx	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 09/20/2016

11/29/2018

Loc: 580
81511

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : IR 68 Correction factor: +0.1	/			☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?			/	☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: 7194220/04	/			☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 11/3/18

QA026R30.doc, 080916

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-81511-3

Login Number: 81511
List Number: 1
Creator: O'Connell, Jason I

List Source: TestAmerica Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: AECOM
Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-81511-3

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PCB1L (30-140)	PCB3L (30-140)	PCB4L (30-140)	PCB15L (30-140)	PCB19L (30-140)	PCB37L (30-140)	PCB54L (30-140)	PCB77L (30-140)
580-81511-1	PDI-ST-T06B-1810	59	63	75	75	92	84	50	86
580-81511-2	PDI-ST-T06A-1810	59	61	75	77	90	87	50	85
580-81511-3	PDI-ST-T07A-1810	58	59	72	75	86	82	49	83
580-81511-4	PDI-ST-T07B-1810	60	62	75	79	88	89	49	86
LCS 140-25296/12-B	Lab Control Sample	54	53	68	68	82	76	52	81
LCSD 140-25296/13-B	Lab Control Sample Dup	49	49	62	62	74	70	43 q	76
MB 140-25296/11-B	Method Blank	53	53	68	65	76	75	48	78

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PCB81L (30-140)	PCB104L (30-140)	PCB105L (30-140)	P114L (30-140)	PCB118L (30-140)	PCB123L (30-140)	PCB126L (30-140)	PCB155L (30-140)
580-81511-1	PDI-ST-T06B-1810	85	84	90	90	90	88	85	82
580-81511-2	PDI-ST-T06A-1810	84	81	90	89	89	88	84	82
580-81511-3	PDI-ST-T07A-1810	80	77	88	88	86	85	84	80
580-81511-4	PDI-ST-T07B-1810	85	83	89	90	88	88	86	84
LCS 140-25296/12-B	Lab Control Sample	78	72	87	86	86	84	83	79
LCSD 140-25296/13-B	Lab Control Sample Dup	75	65	84	83	81	80	81	75
MB 140-25296/11-B	Method Blank	77	71	87	86	86	84	84	83

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PCB156L (30-140)	PCB157L (30-140)	PCB167L (30-140)	PCB169L (30-140)	PCB170L (30-140)	PCB188L (30-140)	PCB189L (30-140)	PCB202L (30-140)
580-81511-1	PDI-ST-T06B-1810	83 C	83 C156	88	91	84	95	84	99
580-81511-2	PDI-ST-T06A-1810	82 C	82 C156	87	93	83	91	81	101
580-81511-3	PDI-ST-T07A-1810	82 C	82 C156	88	92	83	90	80	100
580-81511-4	PDI-ST-T07B-1810	83 C	83 C156	91	94	85	93	81	105
LCS 140-25296/12-B	Lab Control Sample	88 C	88 C156	88	92	85	84	79	104
LCSD 140-25296/13-B	Lab Control Sample Dup	85 C	85 C156	85	88	82	79	74	100
MB 140-25296/11-B	Method Blank	87 C	87 C156	87	92	86	86	76	107

		Percent Isotope Dilution Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-81511-1	PDI-ST-T06B-1810	75	86	85	81
580-81511-2	PDI-ST-T06A-1810	74	84	84	85
580-81511-3	PDI-ST-T07A-1810	74	86	86	85
580-81511-4	PDI-ST-T07B-1810	76	87	86	86
LCS 140-25296/12-B	Lab Control Sample	76	90	89	93
LCSD 140-25296/13-B	Lab Control Sample Dup	72	87	85	91
MB 140-25296/11-B	Method Blank	75	89	88	96

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L

PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L
PCB208L = PCB-208L
PCB209L = PCB-209L

Method: 1668A - Chlorinated Biphenyl Congeners (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB1L	PCB3L	PCB4L	PCB15L	PCB19L	PCB37L	PCB54L	PCB77L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
580-81511-5	PDI-RB-ST-1810	58	58	71	75	73	89	49	89
LCS 140-25438/12-A	Lab Control Sample	51	58	66	74	78	88	53	91
MB 140-25438/11-A	Method Blank	59	61	74	78	80	85	52	87

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB81L	PCB104L	PCB105L	P114L	PCB118L	PCB123L	PCB126L	PCB155L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
580-81511-5	PDI-RB-ST-1810	87	59	89	85	87	82	84	66
LCS 140-25438/12-A	Lab Control Sample	89	72	95	92	92	88	89	79
MB 140-25438/11-A	Method Blank	84	92	96	92	94	90	91	100

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PCB156L	PCB157L	PCB167L	PCB169L	PCB170L	PCB188L	PCB189L	PCB202L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)	(30-140)
580-81511-5	PDI-RB-ST-1810	84 C	84 C156	84	86	82	73	74	98
LCS 140-25438/12-A	Lab Control Sample	91 C	91 C156	92	96	90	86	84	106
MB 140-25438/11-A	Method Blank	94 C	94 C156	95	100	92	87	81	106

		Percent Isotope Dilution Recovery (Acceptance Limits)			
		PCB205L	PCB206L	PCB208L	PCB209L
Lab Sample ID	Client Sample ID	(30-140)	(30-140)	(30-140)	(30-140)
580-81511-5	PDI-RB-ST-1810	73	87	83	90
LCS 140-25438/12-A	Lab Control Sample	81	95	95	101
MB 140-25438/11-A	Method Blank	81	99	94	101

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L

PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L
PCB208L = PCB-208L
PCB209L = PCB-209L