

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-77769-3

Client Project/Site: Portland Harbor Pre-Remedial Design
Revision: 1

For:

AECOM
1111 Third Ave
Suite 1600
Seattle, Washington 98101

Attn: Karen Mixon

M. Elaine Walker

Authorized for release by:
7/27/2018 9:44:43 AM

Elaine Walker, Project Manager II
(253)248-4972
elaine.walker@testamericainc.com

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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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Case Narrative

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

TestAmerica Job ID: 580-77769-3

Job ID: 580-77769-3

Laboratory: TestAmerica Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Portland Harbor Pre-Remedial Design

Report Number: 580-77769-3

REVISION 1: JULY 25, 2018

This report was revised to include the Estimated Maximum Possible Concentrations (EMPCs) for PCB 5 and/or PCB 159 where the original values were outside the theoretical ion ratio limits and were not being adjusted to reflect the EMPC values.

This report was revised to correct results which were originally reported using zero area of one of the two masses used for quantitation.

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

Eight samples were received on 6/4/2018 2:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.9° C and 3.0° C.

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

This report contains results of PCB Congeners by Method 1668A, performed by 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-SG-S109 (580-77769-1), PDI-SG-S113 (580-77769-2), PDI-SG-S116 (580-77769-3), PDI-SG-S116-D (580-77769-4), PDI-SG-S015 (580-77769-5), PDI-SG-S203 (580-77769-6), PDI-SG-S203-D (580-77769-7) and PDI-SG-S176 (580-77769-8) were analyzed for polychlorinated biphenyls congeners (PCBs) in accordance with EPA Method 1668A. The samples were prepared on 06/13/2018 and analyzed on 06/22/2018, 06/23/2018 and 06/25/2018.

Several analytes were detected in method blank MB 140-21154/16-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.

Several Isotope Dilution Analyte (IDA) recoveries are above the method recommended limit for the following sample: PDI-SG-S109 (580-77769-1). The target PCB 32 and 54 may have a low bias.

Samples PDI-SG-S015 (580-77769-5)[10X] and PDI-SG-S176 (580-77769-8)[5X] required dilution prior to analysis. The reporting limits

Case Narrative

Client: AECOM
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Laboratory: TestAmerica Seattle (Continued)

have been adjusted accordingly. Sample PDI-SG-S015 (580-77769-5) was originally analyzed undiluted. The mass spectrometer was unable to lock due to extreme matrix interferences during this analysis. The sample was analyzed at a 10-fold dilution to produce usable data. The associated matrix spike and matrix spike duplicate did not contain the same interference. A lack of sample homogeneity should be considered the root cause.

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

Definitions/Glossary

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

TestAmerica Job ID: 580-77769-3

Qualifiers

Dioxin

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.
C93	The compound co-eluted with PCB-93
C90	The compound co-eluted with PCB-90
C98	The compound co-eluted with PCB-98
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
*	Isotope Dilution analyte is outside acceptance limits.
C20	The compound co-eluted with PCB-20
C26	The compound co-eluted with PCB-26
C18	The compound co-eluted with PCB-18
S	Ion suppression
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.
α	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

TestAmerica Seattle

Definitions/Glossary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77769-3

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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
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 Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S109

Date Collected: 06/01/18 11:25

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-1

Matrix: Solid

Percent Solids: 62.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0071	J q B	0.0098	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-2	0.0062	J q B	0.0098	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-3	0.0087	J B	0.0098	0.00086	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-4	0.037	B	0.020	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-5	ND		0.0098	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-6	0.030		0.0098	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-7	0.0022	J q	0.0098	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-8	0.082	B	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-9	0.0018	J q B	0.0098	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-10	ND		0.0098	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-11	0.033	B	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-12	0.0096	J C	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-13	0.0096	J C12	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-14	ND		0.0098	0.00095	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-15	0.027	B	0.0098	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-16	0.12	B	0.0098	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-17	0.22	B	0.0098	0.00090	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-18	0.34	C	0.020	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-19	0.091		0.0098	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-20	0.70	C B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-21	0.13	C B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-22	0.20		0.0098	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-23	ND		0.0098	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-24	ND		0.0098	0.00068	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-25	0.16		0.0098	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-26	0.17	C B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-27	0.038		0.0098	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-28	0.70	C20 B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-29	0.17	C26 B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-30	0.34	C18	0.020	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-31	0.54	B	0.020	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-32	0.075	S B	0.0098	0.00062	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-33	0.13	C21 B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-34	0.0089	J	0.0098	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-35	0.0077	J	0.0098	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-36	ND		0.0098	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-37	0.060	B	0.0098	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-38	ND		0.0098	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-39	ND		0.0098	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-40	0.30	C B	0.029	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-41	0.30	C40 B	0.029	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-42	0.18		0.0098	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-43	0.021	C	0.020	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-44	0.65	C B	0.029	0.00066	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-45	0.14	C	0.020	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-46	0.077		0.0098	0.00091	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-47	0.65	C44 B	0.029	0.00066	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-48	0.050		0.0098	0.00070	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-49	0.42	S C B	0.020	0.00059	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S109

Lab Sample ID: 580-77769-1

Date Collected: 06/01/18 11:25

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 62.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.19	C B	0.020	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-51	0.14	C45	0.020	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-52	0.79	B	0.0098	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-53	0.19	C50 B	0.020	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-54	0.0040	J q S	0.0098	0.000072	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-55	ND		0.0098	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-56	0.12	B	0.0098	0.00051	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-57	ND		0.0098	0.00051	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-58	ND		0.0098	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-59	0.040	C B	0.029	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-60	0.033	B	0.0098	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-61	0.46	C B	0.039	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-62	0.040	C59 B	0.029	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-63	0.021		0.0098	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-64	0.17	B	0.0098	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-65	0.65	C44 B	0.029	0.00066	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-66	0.27	B	0.0098	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-67	0.0082	J	0.0098	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-68	0.0055	J	0.0098	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-69	0.42	S C49 B	0.020	0.00059	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-70	0.46	C61 B	0.039	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-71	0.30	C40 B	0.029	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-72	0.0081	J	0.0098	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-73	0.021	C43	0.020	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-74	0.46	C61 B	0.039	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-75	0.040	C59 B	0.029	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-76	0.46	C61 B	0.039	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-77	0.020		0.0098	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-78	ND		0.0098	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-79	ND		0.0098	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-80	ND		0.0098	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-81	ND		0.0098	0.00048	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-82	0.026	q	0.0098	0.00058	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-83	0.20	C B	0.020	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-84	0.10	B	0.0098	0.00061	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-85	0.045	C	0.029	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-86	0.16	C B	0.059	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-87	0.16	C86 B	0.059	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-88	0.071	C B	0.020	0.00053	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-89	0.0026	J q S	0.0098	0.00057	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-90	0.33	C B	0.029	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-91	0.071	C88 B	0.020	0.00053	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-92	0.094	B	0.0098	0.00055	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-93	0.0051	J C	0.020	0.00054	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-94	0.0045	J	0.0098	0.00058	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-95	0.39	B	0.0098	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-96	0.0073	J	0.0098	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-97	0.16	C86 B	0.059	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-98	0.013	J q C	0.020	0.00054	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S109

Lab Sample ID: 580-77769-1

Date Collected: 06/01/18 11:25

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 62.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.20	C83 B	0.020	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-100	0.0051	J C93	0.020	0.00054	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-101	0.33	C90 B	0.029	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-102	0.013	J q C98	0.020	0.00054	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-103	0.016	B	0.0098	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-104	ND		0.0098	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-105	0.057	B	0.0098	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-106	ND		0.0098	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-107	0.017	B	0.0098	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-108	0.0061	J C B	0.020	0.00086	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-109	0.16	C86 B	0.059	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-110	0.32	C B	0.020	0.00037	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-111	0.0013	J	0.0098	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-112	ND		0.0098	0.00038	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-113	0.33	C90 B	0.029	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-114	0.0034	J q B	0.0098	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-115	0.32	C110 B	0.020	0.00037	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-116	0.045	C85	0.029	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-117	0.045	C85	0.029	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-118	0.16	B	0.0098	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-119	0.16	C86 B	0.059	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-120	0.0030	J	0.0098	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-121	ND		0.0098	0.00037	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-122	0.0026	J q B	0.0098	0.00094	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-123	0.0026	J q	0.0098	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-124	0.0061	J C108 B	0.020	0.00086	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-125	0.16	C86 B	0.059	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-126	ND		0.0098	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-127	ND		0.0098	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-128	0.043	C	0.020	0.00070	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-129	0.33	C B	0.039	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-130	0.019		0.0098	0.00095	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-131	ND		0.0098	0.00096	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-132	0.13		0.0098	0.00092	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-133	0.0091	J q	0.0098	0.00090	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-134	0.023	C B	0.020	0.00093	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-135	0.21	C	0.020	0.00026	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-136	0.075		0.0098	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-137	0.0067	J q B	0.0098	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-138	0.33	C129 B	0.039	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-139	0.0065	J C	0.020	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-140	0.0065	J C139	0.020	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-141	0.073		0.0098	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-142	ND		0.0098	0.00090	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-143	0.023	C134 B	0.020	0.00093	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-144	0.018		0.0098	0.00024	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-145	ND		0.0098	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-146	0.074	B	0.0098	0.00075	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-147	0.39	C B	0.020	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S109

Lab Sample ID: 580-77769-1

Date Collected: 06/01/18 11:25

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 62.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0022	J q	0.0098	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-149	0.39	C147 B	0.020	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-150	0.0022	J	0.0098	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-151	0.21	C135	0.020	0.00026	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-152	ND		0.0098	0.00018	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-153	0.32	C B	0.020	0.00062	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-154	0.0078	J q	0.0098	0.00022	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-155	ND		0.0098	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-156	0.023	C B	0.020	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-157	0.023	C156 B	0.020	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-158	0.028		0.0098	0.00055	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-159	0.0036	J q	0.0098	0.00057	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-160	0.33	C129 B	0.039	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-161	ND		0.0098	0.00059	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-162	ND		0.0098	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-163	0.33	C129 B	0.039	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-164	0.025		0.0098	0.00060	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-165	ND		0.0098	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-166	0.043	C128	0.020	0.00070	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-167	0.0086	J	0.0098	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-168	0.32	C153 B	0.020	0.00062	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-169	ND		0.0098	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-170	0.10		0.0098	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-171	0.033	C B	0.020	0.00029	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-172	0.020	B	0.0098	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-173	0.033	C171 B	0.020	0.00029	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-174	0.15		0.0098	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-175	0.0053	J	0.0098	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-176	0.018		0.0098	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-177	0.084		0.0098	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-178	0.032	B	0.0098	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-179	0.073	B	0.0098	0.00020	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-180	0.23	C B	0.020	0.00022	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-181	0.0015	J	0.0098	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-182	0.0013	J q B	0.0098	0.00024	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-183	0.083	C	0.020	0.00024	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-184	ND		0.0098	0.00021	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-185	0.083	C183	0.020	0.00024	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-186	ND		0.0098	0.00020	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-187	0.19	B	0.0098	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-188	ND		0.0098	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-189	0.0032	J	0.0098	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-190	0.021		0.0098	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-191	0.0042	J q	0.0098	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-192	ND		0.0098	0.00020	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-193	0.23	C180 B	0.020	0.00022	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-194	0.050	B	0.0098	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-195	0.022		0.0098	0.00055	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-196	0.024	B	0.0098	0.00031	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S109

Lab Sample ID: 580-77769-1

Date Collected: 06/01/18 11:25

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 62.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0017	J q	0.0098	0.00021	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-198	0.062	C	0.020	0.00033	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-199	0.062	C198	0.020	0.00033	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-200	0.0061	J q	0.0098	0.00023	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-201	0.0066	J q B	0.0098	0.00022	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-202	0.013		0.0098	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-203	0.037	B	0.0098	0.00029	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-204	ND		0.0098	0.00023	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-205	0.0028	J B	0.0098	0.00037	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-206	0.046	q	0.0098	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-207	0.0033	J	0.0098	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-208	0.0086	J	0.0098	0.00062	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1
PCB-209	0.022	B	0.0098	0.00013	ng/g	☼	06/13/18 11:00	06/23/18 04:07	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	54		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-3L	59		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-4L	73		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-15L	77		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-19L	240	*	30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-37L	82		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-54L	149	S *	30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-77L	86		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-81L	85		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-104L	86		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-105L	81		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-114L	80		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-118L	81		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-123L	82		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-126L	84		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-155L	110		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-156L	80	C	30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-157L	80	C156	30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-167L	80		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-169L	81		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-170L	80		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-188L	79		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-189L	78		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-202L	98		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-205L	75		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-206L	79		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-208L	78		30 - 140	06/13/18 11:00	06/23/18 04:07	1
PCB-209L	72		30 - 140	06/13/18 11:00	06/23/18 04:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	73		40 - 125	06/13/18 11:00	06/23/18 04:07	1
PCB-111L	89		40 - 125	06/13/18 11:00	06/23/18 04:07	1
PCB-178L	80		40 - 125	06/13/18 11:00	06/23/18 04:07	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S113

Date Collected: 06/01/18 11:15

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-2

Matrix: Solid

Percent Solids: 56.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.019	B	0.0099	0.00040	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-2	0.016	B	0.0099	0.00042	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-3	0.0092	J B q	0.0099	0.00046	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-4	0.065	B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-5	0.0038	J	0.0099	0.00089	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-6	0.026		0.0099	0.00088	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-7	0.0048	J q	0.0099	0.00084	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-8	0.11	B	0.020	0.00086	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-9	0.0070	J B q	0.0099	0.00098	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-10	0.0028	J q	0.0099	0.00095	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-11	0.054	B	0.020	0.00081	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-12	0.0082	J C	0.020	0.00081	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-13	0.0082	J C12	0.020	0.00081	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-14	ND		0.0099	0.00074	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-15	0.039	B	0.0099	0.00087	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-16	0.10	B	0.0099	0.00094	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-17	0.10	B	0.0099	0.00072	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-18	0.22	C	0.020	0.00063	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-19	0.035		0.0099	0.00089	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-20	0.28	C B	0.020	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-21	0.12	C B	0.020	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-22	0.090		0.0099	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-23	ND		0.0099	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-24	0.0025	J q	0.0099	0.00054	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-25	0.032		0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-26	0.054	C B	0.020	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-27	0.018		0.0099	0.00054	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-28	0.28	B C20	0.020	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-29	0.054	C26 B	0.020	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-30	0.22	C18	0.020	0.00063	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-31	0.22	B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-32	0.052	B	0.0099	0.00050	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-33	0.12	B C21	0.020	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-34	0.0016	J q	0.0099	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-35	0.0045	J q	0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-36	ND		0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-37	0.053	B	0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-38	ND		0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-39	0.0024	J	0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-40	0.16	C B	0.030	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-41	0.16	B C40	0.030	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-42	0.084		0.0099	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-43	0.012	J C	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-44	0.32	C B	0.030	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-45	0.071	C	0.020	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-46	0.023		0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-47	0.32	B C44	0.030	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-48	0.059		0.0099	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-49	0.21	C B	0.020	0.00094	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S113

Lab Sample ID: 580-77769-2

Date Collected: 06/01/18 11:15

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 56.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.064	C B	0.020	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-51	0.071	C45	0.020	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-52	0.41	B	0.0099	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-53	0.064	C50 B	0.020	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-54	0.0034	J q	0.0099	0.000056	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-55	0.0078	J	0.0099	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-56	0.11	B	0.0099	0.00082	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-57	ND		0.0099	0.00082	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-58	0.0044	J	0.0099	0.00079	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-59	0.024	J C B q	0.030	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-60	0.039	B	0.0099	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-61	0.40	C B	0.040	0.00077	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-62	0.024	J B C59 q	0.030	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-63	0.0087	J	0.0099	0.00071	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-64	0.11	B	0.0099	0.00075	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-65	0.32	B C44	0.030	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-66	0.25	B	0.0099	0.00078	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-67	0.0067	J	0.0099	0.00075	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-68	0.0043	J q	0.0099	0.00071	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-69	0.21	B C49	0.020	0.00094	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-70	0.40	C61 B	0.040	0.00077	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-71	0.16	B C40	0.030	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-72	0.011		0.0099	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-73	0.012	J C43	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-74	0.40	C61 B	0.040	0.00077	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-75	0.024	J B C59 q	0.030	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-76	0.40	C61 B	0.040	0.00077	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-77	0.020		0.0099	0.00073	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-78	ND		0.0099	0.00079	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-79	0.0060	J	0.0099	0.00067	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-80	ND		0.0099	0.00070	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-81	0.00089	J q	0.0099	0.00076	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-82	0.051		0.0099	0.00042	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-83	0.31	C B	0.020	0.00041	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-84	0.12	B	0.0099	0.00045	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-85	0.069	C	0.030	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-86	0.26	C B	0.060	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-87	0.26	B C86	0.060	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-88	0.078	C B	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-89	0.0052	J	0.0099	0.00042	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-90	0.43	C B	0.030	0.00033	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-91	0.078	C88 B	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-92	0.093	B	0.0099	0.00040	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-93	0.045	C	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-94	0.0035	J q	0.0099	0.00042	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-95	0.36	B	0.0099	0.00041	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-96	0.0053	J q	0.0099	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-97	0.26	B C86	0.060	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-98	0.019	J C q	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S113

Lab Sample ID: 580-77769-2

Date Collected: 06/01/18 11:15

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 56.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.31	C83 B	0.020	0.00041	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-100	0.045	C93	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-101	0.43	B C90	0.030	0.00033	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-102	0.019	J C98 q	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-103	0.013	B	0.0099	0.00036	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-104	ND		0.0099	0.00028	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-105	0.11	B	0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-106	ND		0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-107	0.032	B	0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-108	0.0097	J C B	0.020	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-109	0.26	B C86	0.060	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-110	0.45	C B	0.020	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-111	0.0021	J q	0.0099	0.00025	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-112	ND		0.0099	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-113	0.43	B C90	0.030	0.00033	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-114	0.0072	J B	0.0099	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-115	0.45	B C110	0.020	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-116	0.069	C85	0.030	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-117	0.069	C85	0.030	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-118	0.31	B	0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-119	0.26	B C86	0.060	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-120	0.0061	J q	0.0099	0.00025	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-121	ND		0.0099	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-122	0.0052	J B q	0.0099	0.0015	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-123	0.0046	J q	0.0099	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-124	0.0097	J B C108	0.020	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-125	0.26	B C86	0.060	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-126	ND		0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-127	ND		0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-128	0.072	C	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-129	0.48	C B	0.040	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-130	0.036		0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-131	0.0054	J	0.0099	0.0014	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-132	0.17		0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-133	0.012		0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-134	0.030	C B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-135	0.20	C	0.020	0.00037	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-136	0.069		0.0099	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-137	0.017	B	0.0099	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-138	0.48	B C129	0.040	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-139	0.010	J C	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-140	0.010	J C139	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-141	0.091		0.0099	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-142	ND		0.0099	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-143	0.030	C134 B	0.020	0.0013	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-144	0.021		0.0099	0.00034	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-145	ND		0.0099	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-146	0.10	B	0.0099	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-147	0.44	C B	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S113

Lab Sample ID: 580-77769-2

Date Collected: 06/01/18 11:15

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 56.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0020	J q	0.0099	0.00035	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-149	0.44	B C147	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-150	0.0020	J q	0.0099	0.00024	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-151	0.20	C135	0.020	0.00037	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-152	0.00062	J q	0.0099	0.00026	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-153	0.45	C B	0.020	0.00089	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-154	0.015	q	0.0099	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-155	0.00028	J B q	0.0099	0.00024	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-156	0.043	C B	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-157	0.043	C156 B	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-158	0.042		0.0099	0.00079	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-159	0.0061	J	0.0099	0.00081	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-160	0.48	B C129	0.040	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-161	ND		0.0099	0.00084	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-162	ND		0.0099	0.00080	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-163	0.48	B C129	0.040	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-164	0.035		0.0099	0.00086	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-165	ND		0.0099	0.00096	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-166	0.072	C128	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-167	0.015		0.0099	0.00058	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-168	0.45	B C153	0.020	0.00089	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-169	ND		0.0099	0.00062	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-170	0.17		0.0099	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-171	0.052	C B	0.020	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-172	0.033	B	0.0099	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-173	0.052	C171 B	0.020	0.00031	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-174	0.20		0.0099	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-175	0.0073	J	0.0099	0.00029	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-176	0.023		0.0099	0.00020	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-177	0.12		0.0099	0.00032	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-178	0.042	B	0.0099	0.00030	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-179	0.081	B	0.0099	0.00022	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-180	0.37	C B	0.020	0.00024	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-181	0.0034	J	0.0099	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-182	ND		0.0099	0.00026	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-183	0.12	C	0.020	0.00026	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-184	ND		0.0099	0.00022	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-185	0.12	C183	0.020	0.00026	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-186	ND		0.0099	0.00021	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-187	0.24	B	0.0099	0.00027	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-188	ND		0.0099	0.00020	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-189	0.0059	J	0.0099	0.00043	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-190	0.034		0.0099	0.00020	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-191	0.0084	J	0.0099	0.00021	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-192	ND		0.0099	0.00022	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-193	0.37	C180 B	0.020	0.00024	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-194	0.088	B	0.0099	0.0010	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-195	0.038		0.0099	0.0011	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-196	0.041	B	0.0099	0.00064	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S113

Lab Sample ID: 580-77769-2

Date Collected: 06/01/18 11:15

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 56.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0035	J	0.0099	0.00044	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-198	0.10	C	0.020	0.00068	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-199	0.10	C198	0.020	0.00068	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-200	0.012		0.0099	0.00048	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-201	0.011	B	0.0099	0.00047	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-202	0.019		0.0099	0.00053	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-203	0.060	B	0.0099	0.00060	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-204	ND		0.0099	0.00048	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-205	0.0041	J B	0.0099	0.00076	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-206	0.068		0.0099	0.0012	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-207	0.0040	J q	0.0099	0.00078	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-208	0.016		0.0099	0.00085	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1
PCB-209	0.060	B	0.0099	0.00053	ng/g	☼	06/13/18 11:00	06/22/18 21:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	56		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-3L	58		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-4L	76		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-15L	82		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-19L	91		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-37L	84		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-54L	113		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-77L	87		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-81L	85		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-104L	88		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-105L	86		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-114L	85		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-118L	88		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-123L	89		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-126L	88		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-155L	111		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-156L	86	C	30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-157L	86	C156	30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-167L	86		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-169L	86		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-170L	84		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-188L	85		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-189L	84		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-202L	103		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-205L	79		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-206L	85		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-208L	84		30 - 140	06/13/18 11:00	06/22/18 21:27	1
PCB-209L	76		30 - 140	06/13/18 11:00	06/22/18 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	75		40 - 125	06/13/18 11:00	06/22/18 21:27	1
PCB-111L	87		40 - 125	06/13/18 11:00	06/22/18 21:27	1
PCB-178L	85		40 - 125	06/13/18 11:00	06/22/18 21:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116

Date Collected: 06/01/18 09:55

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-3

Matrix: Solid

Percent Solids: 64.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0048	J q B	0.010	0.00038	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-2	0.0058	J B	0.010	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-3	0.0039	J q B	0.010	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-4	0.014	J B	0.020	0.00069	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-5	ND		0.010	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-6	0.0044	J q	0.010	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-7	0.0014	J	0.010	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-8	0.022	B	0.020	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-9	0.0013	J q B	0.010	0.00052	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-10	ND		0.010	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-11	0.034	B	0.020	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-12	0.0028	J C	0.020	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-13	0.0028	J C12	0.020	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-14	ND		0.010	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-15	0.017	B	0.010	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-16	0.021	q B	0.010	0.00059	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-17	0.029	B	0.010	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-18	0.052	C	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-19	0.0089	J q	0.010	0.00055	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-20	0.12	C B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-21	0.041	C B	0.020	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-22	0.030		0.010	0.00087	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-23	ND		0.010	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-24	ND		0.010	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-25	0.014		0.010	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-26	0.025	C B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-27	0.0068	J	0.010	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-28	0.12	C20 B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-29	0.025	C26 B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-30	0.052	C18	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-31	0.077	B	0.020	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-32	0.015	q S B	0.010	0.00031	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-33	0.041	C21 B	0.020	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-34	ND		0.010	0.00088	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-35	0.0023	J q	0.010	0.00084	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-36	ND		0.010	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-37	0.030	B	0.010	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-38	ND		0.010	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-39	ND		0.010	0.00075	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-40	0.077	C B	0.030	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-41	0.077	C40 B	0.030	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-42	0.042		0.010	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-43	0.0066	J C	0.020	0.00098	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-44	0.19	C B	0.030	0.00097	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-45	0.032	C	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-46	0.010		0.010	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-47	0.19	C44 B	0.030	0.00097	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-48	0.029		0.010	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-49	0.11	C B	0.020	0.00087	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116

Lab Sample ID: 580-77769-3

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.024	C B	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-51	0.032	C45	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-52	0.21	B	0.010	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-53	0.024	C50 B	0.020	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-54	0.0011	J q S	0.010	0.000042	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-55	ND		0.010	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-56	0.072	B	0.010	0.00075	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-57	ND		0.010	0.00075	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-58	ND		0.010	0.00073	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-59	0.013	J q C B	0.030	0.00073	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-60	0.022	B	0.010	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-61	0.23	C B	0.040	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-62	0.013	J q C59 B	0.030	0.00073	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-63	0.0063	J	0.010	0.00065	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-64	0.061	B	0.010	0.00069	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-65	0.19	C44 B	0.030	0.00097	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-66	0.17	B	0.010	0.00072	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-67	0.0036	J q	0.010	0.00070	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-68	0.0061	J	0.010	0.00066	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-69	0.11	C49 B	0.020	0.00087	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-70	0.23	C61 B	0.040	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-71	0.077	C40 B	0.030	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-72	0.0034	J	0.010	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-73	0.0066	J C43	0.020	0.00098	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-74	0.23	C61 B	0.040	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-75	0.013	J q C59 B	0.030	0.00073	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-76	0.23	C61 B	0.040	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-77	0.016		0.010	0.00069	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-78	ND		0.010	0.00073	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-79	0.0019	J q	0.010	0.00062	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-80	ND		0.010	0.00064	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-81	ND		0.010	0.00068	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-82	0.030		0.010	0.00053	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-83	0.15	C B	0.020	0.00051	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-84	0.057	B	0.010	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-85	0.038	C	0.030	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-86	0.13	C B	0.060	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-87	0.13	C86 B	0.060	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-88	0.038	C B	0.020	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-89	0.0046	J	0.010	0.00052	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-90	0.22	C B	0.030	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-91	0.038	C88 B	0.020	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-92	0.051	B	0.010	0.00050	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-93	0.0082	J q C	0.020	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-94	ND		0.010	0.00053	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-95	0.17	B	0.010	0.00051	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-96	0.0027	J q	0.010	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-97	0.13	C86 B	0.060	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-98	0.012	J C	0.020	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116

Lab Sample ID: 580-77769-3

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.15	C83 B	0.020	0.00051	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-100	0.0082	J q C93	0.020	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-101	0.22	C90 B	0.030	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-102	0.012	J C98	0.020	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-103	0.0049	J q B	0.010	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-104	ND		0.010	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-105	0.060	B	0.010	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-106	ND		0.010	0.00084	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-107	0.016	B	0.010	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-108	0.0058	J C B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-109	0.13	C86 B	0.060	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-110	0.24	C B	0.020	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-111	ND		0.010	0.00032	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-112	ND		0.010	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-113	0.22	C90 B	0.030	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-114	0.0028	J q B	0.010	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-115	0.24	C110 B	0.020	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-116	0.038	C85	0.030	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-117	0.038	C85	0.030	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-118	0.17	B	0.010	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-119	0.13	C86 B	0.060	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-120	0.0014	J q	0.010	0.00031	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-121	ND		0.010	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-122	0.0029	J B	0.010	0.00093	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-123	0.0032	J q	0.010	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-124	0.0058	J C108 B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-125	0.13	C86 B	0.060	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-126	ND		0.010	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-127	ND		0.010	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-128	0.044	C	0.020	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-129	0.28	C B	0.040	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-130	0.022		0.010	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-131	ND		0.010	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-132	0.093		0.010	0.00098	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-133	0.0066	J	0.010	0.00095	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-134	0.019	J C B	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-135	0.10	C	0.020	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-136	0.037		0.010	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-137	0.0093	J q B	0.010	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-138	0.28	C129 B	0.040	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-139	0.0058	J C	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-140	0.0058	J C139	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-141	0.053		0.010	0.00088	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-142	ND		0.010	0.00096	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-143	0.019	J C134 B	0.020	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-144	0.0088	J q	0.010	0.00016	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-145	ND		0.010	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-146	0.057	B	0.010	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-147	0.24	C B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116

Lab Sample ID: 580-77769-3

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.00065	J q	0.010	0.00016	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-149	0.24	C147 B	0.020	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-150	0.0011	J	0.010	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-151	0.10	C135	0.020	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-152	ND		0.010	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-153	0.25	C B	0.020	0.00066	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-154	0.0079	J q	0.010	0.00014	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-155	ND		0.010	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-156	0.025	C B	0.020	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-157	0.025	C156 B	0.020	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-158	0.025		0.010	0.00059	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-159	0.0032	J	0.010	0.00061	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-160	0.28	C129 B	0.040	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-161	ND		0.010	0.00063	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-162	ND		0.010	0.00060	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-163	0.28	C129 B	0.040	0.00076	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-164	0.020		0.010	0.00064	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-165	ND		0.010	0.00072	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-166	0.044	C128	0.020	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-167	0.0093	J	0.010	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-168	0.25	C153 B	0.020	0.00066	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-169	ND		0.010	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-170	0.087		0.010	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-171	0.030	C B	0.020	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-172	0.019	B	0.010	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-173	0.030	C171 B	0.020	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-174	0.11		0.010	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-175	0.0044	J q	0.010	0.00040	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-176	0.011		0.010	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-177	0.065		0.010	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-178	0.022	B	0.010	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-179	0.045	B	0.010	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-180	0.20	C B	0.020	0.00033	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-181	0.0020	J	0.010	0.00038	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-182	ND		0.010	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-183	0.065	C	0.020	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-184	ND		0.010	0.00031	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-185	0.065	C183	0.020	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-186	ND		0.010	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-187	0.14	B	0.010	0.00037	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-188	ND		0.010	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-189	0.0037	J	0.010	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-190	0.018		0.010	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-191	0.0049	J q	0.010	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-192	ND		0.010	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-193	0.20	C180 B	0.020	0.00033	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-194	0.053	B	0.010	0.00072	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-195	0.021		0.010	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-196	0.023	B	0.010	0.00037	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116

Lab Sample ID: 580-77769-3

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0016	J q	0.010	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-198	0.065	C	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-199	0.065	C198	0.020	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-200	0.0068	J	0.010	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-201	0.0075	J B	0.010	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-202	0.013		0.010	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-203	0.041	B	0.010	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-204	ND		0.010	0.00028	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-205	0.0028	J q B	0.010	0.00054	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-206	0.059	q	0.010	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-207	0.0047	J q	0.010	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-208	0.012	q	0.010	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1
PCB-209	0.037	B	0.010	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 05:10	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	54		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-3L	57		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-4L	71		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-15L	78		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-19L	90		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-37L	80		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-54L	108	S	30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-77L	82		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-81L	81		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-104L	84		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-105L	81		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-114L	80		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-118L	84		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-123L	82		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-126L	82		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-155L	105		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-156L	79	C	30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-157L	79	C156	30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-167L	80		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-169L	78		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-170L	80		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-188L	82		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-189L	77		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-202L	99		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-205L	74		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-206L	80		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-208L	79		30 - 140	06/13/18 11:00	06/23/18 05:10	1
PCB-209L	72		30 - 140	06/13/18 11:00	06/23/18 05:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	74		40 - 125	06/13/18 11:00	06/23/18 05:10	1
PCB-111L	81		40 - 125	06/13/18 11:00	06/23/18 05:10	1
PCB-178L	81		40 - 125	06/13/18 11:00	06/23/18 05:10	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116-D

Date Collected: 06/01/18 09:55

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-4

Matrix: Solid

Percent Solids: 64.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0033	J q B	0.0096	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-2	0.0050	J B	0.0096	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-3	0.0035	J q B	0.0096	0.00048	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-4	0.014	J B	0.019	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-5	ND		0.0096	0.00048	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-6	0.0033	J q	0.0096	0.00048	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-7	ND		0.0096	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-8	0.018	J B	0.019	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-9	ND		0.0096	0.00053	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-10	0.00076	J q	0.0096	0.00052	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-11	0.035	B	0.019	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-12	ND	C	0.019	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-13	ND	C12	0.019	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-14	ND		0.0096	0.00040	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-15	0.014	B	0.0096	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-16	0.018	B	0.0096	0.00061	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-17	0.024	B	0.0096	0.00047	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-18	0.040	C	0.019	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-19	0.0099		0.0096	0.00057	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-20	0.096	C B	0.019	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-21	0.028	C B	0.019	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-22	0.022		0.0096	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-23	ND		0.0096	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-24	ND		0.0096	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-25	0.0086	J	0.0096	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-26	0.016	J C B	0.019	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-27	0.0036	J q	0.0096	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-28	0.096	C20 B	0.019	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-29	0.016	J C26 B	0.019	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-30	0.040	C18	0.019	0.00041	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-31	0.057	B	0.019	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-32	0.014	S B	0.0096	0.00032	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-33	0.028	C21 B	0.019	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-34	0.0013	J q	0.0096	0.00086	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-35	0.0018	J q	0.0096	0.00082	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-36	ND		0.0096	0.00075	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-37	0.025	B	0.0096	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-38	ND		0.0096	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-39	ND		0.0096	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-40	0.066	C B	0.029	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-41	0.066	C40 B	0.029	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-42	0.036		0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-43	0.0039	J q C	0.019	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-44	0.14	C B	0.029	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-45	0.021	q C	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-46	0.0062	J q	0.0096	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-47	0.14	C44 B	0.029	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-48	0.018	q	0.0096	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-49	0.094	C B	0.019	0.00094	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116-D

Lab Sample ID: 580-77769-4

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.022	C B	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-51	0.021	q C45	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-52	0.18	B	0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-53	0.022	C50 B	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-54	0.0016	J	0.0096	0.000062	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-55	ND		0.0096	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-56	0.063	B	0.0096	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-57	ND		0.0096	0.00081	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-58	0.00090	J q	0.0096	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-59	0.012	J C B	0.029	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-60	0.014	B	0.0096	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-61	0.20	C B	0.039	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-62	0.012	J C59 B	0.029	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-63	0.0055	J	0.0096	0.00070	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-64	0.051	B	0.0096	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-65	0.14	C44 B	0.029	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-66	0.15	B	0.0096	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-67	0.0029	J	0.0096	0.00075	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-68	0.0018	J	0.0096	0.00071	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-69	0.094	C49 B	0.019	0.00094	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-70	0.20	C61 B	0.039	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-71	0.066	C40 B	0.029	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-72	0.0028	J	0.0096	0.00080	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-73	0.0039	J q C43	0.019	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-74	0.20	C61 B	0.039	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-75	0.012	J C59 B	0.029	0.00079	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-76	0.20	C61 B	0.039	0.00077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-77	0.012	q	0.0096	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-78	ND		0.0096	0.00078	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-79	0.0027	J	0.0096	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-80	ND		0.0096	0.00069	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-81	ND		0.0096	0.00073	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-82	0.028		0.0096	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-83	0.15	C B	0.019	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-84	0.056	B	0.0096	0.00049	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-85	0.038	C	0.029	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-86	0.12	C B	0.058	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-87	0.12	C86 B	0.058	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-88	0.035	C B	0.019	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-89	0.0038	J	0.0096	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-90	0.21	C B	0.029	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-91	0.035	C88 B	0.019	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-92	0.049	B	0.0096	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-93	0.0081	J C	0.019	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-94	0.0022	J	0.0096	0.00046	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-95	0.17	B	0.0096	0.00045	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-96	0.0023	J q	0.0096	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-97	0.12	C86 B	0.058	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-98	0.0091	J q C	0.019	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116-D

Lab Sample ID: 580-77769-4

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.15	C83 B	0.019	0.00044	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-100	0.0081	J C93	0.019	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-101	0.21	C90 B	0.029	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-102	0.0091	J q C98	0.019	0.00043	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-103	0.0052	J q B	0.0096	0.00039	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-104	ND		0.0096	0.00031	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-105	0.057	B	0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-106	ND		0.0096	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-107	0.015	q B	0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-108	0.0057	J q C B	0.019	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-109	0.12	C86 B	0.058	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-110	0.24	C B	0.019	0.00029	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-111	0.0013	J q	0.0096	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-112	ND		0.0096	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-113	0.21	C90 B	0.029	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-114	0.0042	J B	0.0096	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-115	0.24	C110 B	0.019	0.00029	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-116	0.038	C85	0.029	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-117	0.038	C85	0.029	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-118	0.17	B	0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-119	0.12	C86 B	0.058	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-120	0.0025	J q	0.0096	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-121	ND		0.0096	0.00029	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-122	0.0042	J B	0.0096	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-123	0.0027	J	0.0096	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-124	0.0057	J q C108 E	0.019	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-125	0.12	C86 B	0.058	0.00035	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-126	ND		0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-127	ND		0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-128	0.043	C	0.019	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-129	0.29	C B	0.039	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-130	0.024		0.0096	0.0015	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-131	0.0026	J q	0.0096	0.0015	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-132	0.094		0.0096	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-133	0.0064	J q	0.0096	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-134	0.020	C B	0.019	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-135	0.11	C	0.019	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-136	0.036		0.0096	0.00013	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-137	0.010	B	0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-138	0.29	C129 B	0.039	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-139	0.0047	J q C	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-140	0.0047	J q C139	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-141	0.054		0.0096	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-142	ND		0.0096	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-143	0.020	C134 B	0.019	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-144	0.011		0.0096	0.00016	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-145	ND		0.0096	0.00013	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-146	0.059	B	0.0096	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-147	0.25	C B	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116-D

Lab Sample ID: 580-77769-4

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.0096	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-149	0.25	C147 B	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-150	0.00072	J q	0.0096	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-151	0.11	C135	0.019	0.00017	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-152	0.00044	J	0.0096	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-153	0.26	C B	0.019	0.00096	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-154	0.0077	J	0.0096	0.00015	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-155	ND		0.0096	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-156	0.026	C B	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-157	0.026	C156 B	0.019	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-158	0.026		0.0096	0.00085	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-159	0.0032	J q	0.0096	0.00088	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-160	0.29	C129 B	0.039	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-161	ND		0.0096	0.00091	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-162	ND		0.0096	0.00087	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-163	0.29	C129 B	0.039	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-164	0.020		0.0096	0.00093	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-165	ND		0.0096	0.0010	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-166	0.043	C128	0.019	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-167	0.0099		0.0096	0.00064	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-168	0.26	C153 B	0.019	0.00096	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-169	ND		0.0096	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-170	0.096		0.0096	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-171	0.031	C B	0.019	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-172	0.018	B	0.0096	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-173	0.031	C171 B	0.019	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-174	0.12		0.0096	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-175	0.0041	J q	0.0096	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-176	0.013		0.0096	0.000075	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-177	0.066		0.0096	0.00012	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-178	0.024	B	0.0096	0.00011	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-179	0.047	B	0.0096	0.000082	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-180	0.22	C B	0.019	0.000088	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-181	0.0018	J q	0.0096	0.00010	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-182	0.0013	J B	0.0096	0.000097	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-183	0.070	C	0.019	0.000098	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-184	ND		0.0096	0.000083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-185	0.070	C183	0.019	0.000098	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-186	ND		0.0096	0.000080	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-187	0.13	B	0.0096	0.00010	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-188	ND		0.0096	0.000075	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-189	0.0035	J	0.0096	0.00042	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-190	0.019		0.0096	0.000076	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-191	0.0047	J	0.0096	0.000077	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-192	ND		0.0096	0.000081	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-193	0.22	C180 B	0.019	0.000088	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-194	0.060	B	0.0096	0.00074	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-195	0.023		0.0096	0.00083	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-196	0.027	B	0.0096	0.00036	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S116-D

Lab Sample ID: 580-77769-4

Date Collected: 06/01/18 09:55

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 64.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0021	J	0.0096	0.00025	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-198	0.063	C	0.019	0.00038	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-199	0.063	C198	0.019	0.00038	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-200	0.0069	J	0.0096	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-201	0.0069	J B	0.0096	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-202	0.014		0.0096	0.00030	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-203	0.040	B	0.0096	0.00034	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-204	ND		0.0096	0.00027	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-205	0.0024	J B	0.0096	0.00056	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-206	0.053	q	0.0096	0.00092	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-207	0.0026	J q	0.0096	0.00061	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-208	0.010		0.0096	0.00067	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
PCB-209	0.038	B	0.0096	0.00019	ng/g	☼	06/13/18 11:00	06/23/18 06:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	52		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-3L	58		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-4L	72		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-15L	82		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-19L	85		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-37L	84		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-54L	102		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-77L	84		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-81L	82		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-104L	88		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-105L	86		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-114L	85		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-118L	88		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-123L	86		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-126L	88		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-155L	109		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-156L	82	C	30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-157L	82	C156	30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-167L	84		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-169L	84		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-170L	85		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-188L	85		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-189L	82		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-202L	104		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-205L	79		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-206L	83		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-208L	83		30 - 140				06/13/18 11:00	06/23/18 06:14	1
PCB-209L	76		30 - 140				06/13/18 11:00	06/23/18 06:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	79		40 - 125				06/13/18 11:00	06/23/18 06:14	1
PCB-111L	87		40 - 125				06/13/18 11:00	06/23/18 06:14	1
PCB-178L	86		40 - 125				06/13/18 11:00	06/23/18 06:14	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S015

Date Collected: 06/02/18 11:45

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-5

Matrix: Solid

Percent Solids: 37.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0059	J B	0.13	0.00052	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-2	0.015	J B q	0.13	0.00064	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-3	0.0078	J B q	0.13	0.00087	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-4	0.024	J B q	0.26	0.0027	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-5	ND		0.13	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-6	0.011	J q	0.13	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-7	ND		0.13	0.0022	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-8	0.050	J B	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-9	ND		0.13	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-10	ND		0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-11	0.11	J B	0.26	0.0021	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-12	0.0068	J C q	0.26	0.0021	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-13	0.0068	J C12 q	0.26	0.0021	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-14	ND		0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-15	0.054	J B	0.13	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-16	0.025	J B	0.13	0.00092	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-17	0.046	J B	0.13	0.00070	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-18	0.049	J C q	0.26	0.00062	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-19	0.021	J	0.13	0.00087	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-20	0.17	J C B	0.26	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-21	0.056	J C B	0.26	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-22	0.042	J	0.13	0.0033	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-23	ND		0.13	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-24	ND		0.13	0.00053	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-25	0.015	J	0.13	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-26	0.027	J C B	0.26	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-27	0.0078	J q	0.13	0.00053	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-28	0.17	J B C20	0.26	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-29	0.027	J C26 B	0.26	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-30	0.049	J C18 q	0.26	0.00062	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-31	0.11	J B	0.26	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-32	0.029	J B	0.13	0.00048	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-33	0.056	J B C21	0.26	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-34	ND		0.13	0.0033	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-35	ND		0.13	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-36	ND		0.13	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-37	0.043	J B q	0.13	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-38	ND		0.13	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-39	ND		0.13	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-40	0.11	J C B	0.39	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-41	0.11	J B C40	0.39	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-42	0.053	J	0.13	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-43	0.0070	J C	0.26	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-44	0.24	J C B	0.39	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-45	0.049	J C	0.26	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-46	0.011	J q	0.13	0.0036	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-47	0.24	J B C44	0.39	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-48	0.028	J	0.13	0.0028	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-49	0.16	J C B	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S015

Lab Sample ID: 580-77769-5

Date Collected: 06/02/18 11:45

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 37.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.041	J C B	0.26	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-51	0.049	J C45	0.26	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-52	0.29	B	0.13	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-53	0.041	J C50 B	0.26	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-54	0.0047	J q	0.13	0.00016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-55	0.014	J	0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-56	0.10	J B	0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-57	ND		0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-58	ND		0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-59	0.019	J C B	0.39	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-60	0.046	J B	0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-61	0.34	J C B	0.52	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-62	0.019	J B C59	0.39	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-63	0.0075	J	0.13	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-64	0.083	J B	0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-65	0.24	J B C44	0.39	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-66	0.25	B	0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-67	0.0057	J	0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-68	ND		0.13	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-69	0.16	J B C49	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-70	0.34	J C61 B	0.52	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-71	0.11	J B C40	0.39	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-72	0.0048	J q	0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-73	0.0070	J C43	0.26	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-74	0.34	J C61 B	0.52	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-75	0.019	J B C59	0.39	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-76	0.34	J C61 B	0.52	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-77	0.020	J q	0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-78	ND		0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-79	0.0048	J	0.13	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-80	ND		0.13	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-81	ND		0.13	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-82	0.059	J q	0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-83	0.28	C B	0.26	0.0024	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-84	0.097	J B	0.13	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-85	0.083	J C	0.39	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-86	0.26	J C B	0.78	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-87	0.26	J B C86	0.78	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-88	0.072	J C B	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-89	ND		0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-90	0.40	C B	0.39	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-91	0.072	J C88 B	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-92	0.082	J B	0.13	0.0024	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-93	0.0071	J C q	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-94	0.0037	J q	0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-95	0.31	B	0.13	0.0024	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-96	ND		0.13	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-97	0.26	J B C86	0.78	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-98	0.019	J C q	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S015

Lab Sample ID: 580-77769-5

Date Collected: 06/02/18 11:45

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 37.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.28	C83 B	0.26	0.0024	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-100	0.0071	J C93 q	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-101	0.40	B C90	0.39	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-102	0.019	J C98 q	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-103	0.0074	J B q	0.13	0.0021	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-104	ND		0.13	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-105	0.15	B	0.13	0.0028	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-106	ND		0.13	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-107	0.033	J B	0.13	0.0028	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-108	0.013	J C B q	0.26	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-109	0.26	J B C86	0.78	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-110	0.43	C B	0.26	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-111	ND		0.13	0.0015	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-112	ND		0.13	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-113	0.40	B C90	0.39	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-114	0.012	J B	0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-115	0.43	B C110	0.26	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-116	0.083	J C85	0.39	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-117	0.083	J C85	0.39	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-118	0.33	B	0.13	0.0027	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-119	0.26	J B C86	0.78	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-120	ND		0.13	0.0015	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-121	ND		0.13	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-122	0.0090	J B	0.13	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-123	0.0066	J q	0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-124	0.013	J B q C108	0.26	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-125	0.26	J B C86	0.78	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-126	ND		0.13	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-127	ND		0.13	0.0028	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-128	0.083	J C	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-129	0.52	C B	0.52	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-130	0.035	J q	0.13	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-131	0.0045	J q	0.13	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-132	0.16		0.13	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-133	0.0079	J q	0.13	0.0029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-134	0.029	J C B q	0.26	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-135	0.17	J C	0.26	0.00017	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-136	0.057	J	0.13	0.00012	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-137	0.023	J B	0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-138	0.52	B C129	0.52	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-139	0.0083	J C q	0.26	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-140	0.0083	J C139 q	0.26	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-141	0.096	J	0.13	0.0027	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-142	ND		0.13	0.0030	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-143	0.029	J C134 B q	0.26	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-144	0.018	J q	0.13	0.00016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-145	ND		0.13	0.00012	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-146	0.090	J B	0.13	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-147	0.41	C B	0.26	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S015

Lab Sample ID: 580-77769-5

Date Collected: 06/02/18 11:45

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 37.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.13	0.00016	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-149	0.41	B C147	0.26	0.0026	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-150	0.0012	J q	0.13	0.00011	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-151	0.17	J C135	0.26	0.00017	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-152	ND		0.13	0.00012	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-153	0.43	C B	0.26	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-154	0.0096	J	0.13	0.00014	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-155	ND		0.13	0.00011	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-156	0.057	J C B	0.26	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-157	0.057	J C156 B	0.26	0.0025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-158	0.053	J	0.13	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-159	0.0046	J q	0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-160	0.52	B C129	0.52	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-161	ND		0.13	0.0019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-162	ND		0.13	0.0018	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-163	0.52	B C129	0.52	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-164	0.039	J	0.13	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-165	ND		0.13	0.0022	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-166	0.083	J C128	0.26	0.0023	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-167	0.017	J q	0.13	0.0013	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-168	0.43	B C153	0.26	0.0020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-169	ND		0.13	0.0015	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-170	0.13	q	0.13	0.00062	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-171	0.044	J C B	0.26	0.00061	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-172	0.024	J B	0.13	0.00060	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-173	0.044	J C171 B	0.26	0.00061	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-174	0.17		0.13	0.00062	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-175	0.0030	J q	0.13	0.00056	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-176	0.016	J q	0.13	0.00039	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-177	0.090	J	0.13	0.00062	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-178	0.034	J B q	0.13	0.00058	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-179	0.072	J B	0.13	0.00043	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-180	0.32	C B	0.26	0.00046	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-181	0.0021	J q	0.13	0.00053	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-182	ND		0.13	0.00051	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-183	0.11	J C	0.26	0.00052	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-184	ND		0.13	0.00044	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-185	0.11	J C183	0.26	0.00052	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-186	ND		0.13	0.00042	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-187	0.23	B	0.13	0.00053	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-188	ND		0.13	0.00039	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-189	0.0051	J q	0.13	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-190	0.028	J	0.13	0.00040	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-191	0.0057	J q	0.13	0.00040	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-192	ND		0.13	0.00043	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-193	0.32	C180 B	0.26	0.00046	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-194	0.091	J B	0.13	0.00098	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-195	0.034	J	0.13	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-196	0.034	J B q	0.13	0.00027	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S015

Lab Sample ID: 580-77769-5

Date Collected: 06/02/18 11:45

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 37.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0030	J	0.13	0.00019	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-198	0.20	J C	0.26	0.00029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-199	0.20	J C198	0.26	0.00029	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-200	0.011	J q	0.13	0.00020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-201	0.018	J B q	0.13	0.00020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-202	0.066	J q	0.13	0.00022	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-203	0.13	B	0.13	0.00025	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-204	ND		0.13	0.00020	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-205	0.0067	J B	0.13	0.00074	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-206	0.20		0.13	0.0051	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-207	0.016	J	0.13	0.0035	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-208	0.092	J	0.13	0.0038	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
PCB-209	0.082	J B	0.13	0.00050	ng/g	☼	06/13/18 11:00	06/25/18 13:22	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	63		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-3L	55		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-4L	76		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-15L	72		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-19L	81		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-37L	80		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-54L	90		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-77L	84		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-81L	81		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-104L	88		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-105L	82		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-114L	83		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-118L	86		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-123L	85		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-126L	84		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-155L	108		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-156L	81	C	30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-157L	81	C156	30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-167L	82		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-169L	81		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-170L	85		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-188L	86		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-189L	82		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-202L	99		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-205L	77		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-206L	79		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-208L	78		30 - 140				06/13/18 11:00	06/25/18 13:22	10
PCB-209L	71		30 - 140				06/13/18 11:00	06/25/18 13:22	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	78		40 - 125				06/13/18 11:00	06/25/18 13:22	10
PCB-111L	84		40 - 125				06/13/18 11:00	06/25/18 13:22	10
PCB-178L	85		40 - 125				06/13/18 11:00	06/25/18 13:22	10

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203

Date Collected: 06/02/18 11:32

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-6

Matrix: Solid

Percent Solids: 31.0

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.58	B	0.078	0.0035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-2	0.13	B	0.078	0.0041	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-3	0.26	B	0.078	0.0052	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-4	1.8	B	0.16	0.0083	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-5	ND		0.078	0.0066	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-6	0.12		0.078	0.0066	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-7	0.021	J q	0.078	0.0063	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-8	0.32	B	0.16	0.0064	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-9	0.034	J B	0.078	0.0073	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-10	0.11		0.078	0.0071	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-11	0.56	B	0.16	0.0060	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-12	0.087	J C	0.16	0.0060	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-13	0.087	J C12	0.16	0.0060	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-14	ND		0.078	0.0055	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-15	0.46	B	0.078	0.0074	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-16	0.12	q B	0.078	0.0074	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-17	3.0	B	0.078	0.0056	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-18	0.41	C	0.16	0.0050	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-19	5.9		0.078	0.0070	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-20	1.8	C B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-21	0.84	C B	0.16	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-22	0.14		0.078	0.018	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-23	ND		0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-24	ND		0.078	0.0043	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-25	0.48		0.078	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-26	0.17	C B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-27	0.79		0.078	0.0042	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-28	1.8	C20 B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-29	0.17	C26 B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-30	0.41	C18	0.16	0.0050	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-31	0.58	B	0.16	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-32	4.1	B	0.078	0.0039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-33	0.84	C21 B	0.16	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-34	ND		0.078	0.018	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-35	ND		0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-36	ND		0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-37	0.19	B	0.078	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-38	ND		0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-39	ND		0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-40	4.2	C B	0.24	0.059	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-41	4.2	C40 B	0.24	0.059	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-42	0.85		0.078	0.060	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-43	1.2	q C	0.16	0.054	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-44	36	C B	0.24	0.053	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-45	27	C	0.16	0.063	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-46	0.99		0.078	0.073	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-47	36	C44 B	0.24	0.053	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-48	0.43		0.078	0.057	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-49	16	C B	0.16	0.048	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203

Lab Sample ID: 580-77769-6

Date Collected: 06/02/18 11:32

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 31.0

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	14	C B	0.16	0.060	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-51	27	C45	0.16	0.063	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-52	8.6	B	0.078	0.062	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-53	14	C50 B	0.16	0.060	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-54	4.9		0.078	0.0016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-55	ND		0.078	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-56	0.30	B	0.078	0.041	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-57	ND		0.078	0.041	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-58	ND		0.078	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-59	1.5	C B	0.24	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-60	ND		0.078	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-61	2.5	C B	0.31	0.039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-62	1.5	C59 B	0.24	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-63	0.14		0.078	0.036	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-64	0.55	B	0.078	0.038	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-65	36	C44 B	0.24	0.053	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-66	1.8	B	0.078	0.039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-67	ND		0.078	0.038	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-68	0.37	q	0.078	0.036	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-69	16	C49 B	0.16	0.048	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-70	2.5	C61 B	0.31	0.039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-71	4.2	C40 B	0.24	0.059	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-72	0.17		0.078	0.041	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-73	1.2	q C43	0.16	0.054	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-74	2.5	C61 B	0.31	0.039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-75	1.5	C59 B	0.24	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-76	2.5	C61 B	0.31	0.039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-77	ND		0.078	0.038	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-78	ND		0.078	0.040	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-79	ND		0.078	0.034	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-80	ND		0.078	0.035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-81	ND		0.078	0.037	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-82	0.54	q	0.078	0.0035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-83	10	C B	0.16	0.0034	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-84	1.9	B	0.078	0.0037	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-85	1.2	C	0.24	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-86	5.8	C B	0.47	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-87	5.8	C86 B	0.47	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-88	5.4	C B	0.16	0.0032	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-89	ND		0.078	0.0035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-90	18	C B	0.24	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-91	5.4	C88 B	0.16	0.0032	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-92	4.4	B	0.078	0.0033	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-93	5.7	C	0.16	0.0033	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-94	1.2		0.078	0.0035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-95	14	B	0.078	0.0034	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-96	0.81		0.078	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-97	5.8	C86 B	0.47	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-98	2.0	C	0.16	0.0033	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203

Lab Sample ID: 580-77769-6

Date Collected: 06/02/18 11:32

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 31.0

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	10	C83 B	0.16	0.0034	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-100	5.7	C93	0.16	0.0033	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-101	18	C90 B	0.24	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-102	2.0	C98	0.16	0.0033	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-103	2.3	B	0.078	0.0030	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-104	0.60		0.078	0.0023	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-105	1.3	B	0.078	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-106	ND		0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-107	0.66	B	0.078	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-108	0.17	C B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-109	5.8	C86 B	0.47	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-110	10	C B	0.16	0.0022	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-111	0.097		0.078	0.0021	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-112	ND		0.078	0.0023	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-113	18	C90 B	0.24	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-114	0.11	B	0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-115	10	C110 B	0.16	0.0022	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-116	1.2	C85	0.24	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-117	1.2	C85	0.24	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-118	4.8	B	0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-119	5.8	C86 B	0.47	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-120	0.26		0.078	0.0021	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-121	0.14		0.078	0.0022	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-122	0.089	B	0.078	0.019	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-123	0.067	J q	0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-124	0.17	C108 B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-125	5.8	C86 B	0.47	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-126	ND		0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-127	ND		0.078	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-128	2.3	C	0.16	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-129	25	C B	0.31	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-130	1.5		0.078	0.021	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-131	0.27		0.078	0.022	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-132	8.7		0.078	0.021	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-133	0.93		0.078	0.020	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-134	2.1	C B	0.16	0.021	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-135	15	C	0.16	0.0017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-136	5.5		0.078	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-137	0.51	B	0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-138	25	C129 B	0.31	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-139	0.60	C	0.16	0.018	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-140	0.60	C139	0.16	0.018	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-141	5.7		0.078	0.019	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-142	ND		0.078	0.020	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-143	2.1	C134 B	0.16	0.021	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-144	1.4		0.078	0.0016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-145	0.035	J q	0.078	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-146	6.6	B	0.078	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-147	31	C B	0.16	0.018	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203

Lab Sample ID: 580-77769-6

Date Collected: 06/02/18 11:32

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 31.0

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.29		0.078	0.0017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-149	31	C147 B	0.16	0.018	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-150	0.36		0.078	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-151	15	C135	0.16	0.0017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-152	0.20		0.078	0.0012	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-153	28	C B	0.16	0.014	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-154	1.7		0.078	0.0014	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-155	0.048	J B	0.078	0.0011	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-156	1.5	C B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-157	1.5	C156 B	0.16	0.017	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-158	2.2		0.078	0.012	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-159	0.36		0.078	0.013	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-160	25	C129 B	0.31	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-161	ND		0.078	0.013	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-162	ND		0.078	0.013	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-163	25	C129 B	0.31	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-164	2.0		0.078	0.014	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-165	ND		0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-166	2.3	C128	0.16	0.016	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-167	0.67		0.078	0.0094	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-168	28	C153 B	0.16	0.014	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-169	ND		0.078	0.0099	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-170	9.7		0.078	0.0038	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-171	3.2	C B	0.16	0.0037	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-172	1.6	B	0.078	0.0036	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-173	3.2	C171 B	0.16	0.0037	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-174	11		0.078	0.0037	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-175	0.42		0.078	0.0034	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-176	1.3		0.078	0.0024	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-177	6.7		0.078	0.0038	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-178	2.3	B	0.078	0.0035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-179	5.0	B	0.078	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-180	21	C B	0.16	0.0028	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-181	ND		0.078	0.0032	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-182	0.23	B	0.078	0.0030	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-183	6.9	C	0.16	0.0031	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-184	ND		0.078	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-185	6.9	C183	0.16	0.0031	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-186	ND		0.078	0.0025	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-187	13	B	0.078	0.0032	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-188	ND		0.078	0.0023	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-189	0.36		0.078	0.011	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-190	1.9		0.078	0.0024	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-191	0.50		0.078	0.0024	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-192	ND		0.078	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-193	21	C180 B	0.16	0.0028	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-194	4.8	B	0.078	0.020	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-195	2.1		0.078	0.022	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-196	2.2	B	0.078	0.0037	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203

Lab Sample ID: 580-77769-6

Date Collected: 06/02/18 11:32

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 31.0

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.18		0.078	0.0026	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-198	4.2	C	0.16	0.0039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-199	4.2	C198	0.16	0.0039	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-200	0.48		0.078	0.0028	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-201	0.51	B	0.078	0.0027	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-202	0.71		0.078	0.0030	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-203	2.6	B	0.078	0.0035	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-204	ND		0.078	0.0028	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-205	0.25	B	0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-206	1.9	q	0.078	0.015	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-207	0.19		0.078	0.010	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-208	0.37		0.078	0.011	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1
PCB-209	0.42	B	0.078	0.0013	ng/g	☼	06/13/18 11:00	06/23/18 17:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	57		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-3L	56		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-4L	77		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-15L	78		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-19L	80		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-37L	85		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-54L	101		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-77L	87		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-81L	84		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-104L	91		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-105L	87		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-114L	87		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-118L	90		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-123L	88		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-126L	87		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-155L	114		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-156L	85	C	30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-157L	85	C156	30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-167L	85		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-169L	84		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-170L	84		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-188L	87		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-189L	82		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-202L	106		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-205L	79		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-206L	83		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-208L	83		30 - 140	06/13/18 11:00	06/23/18 17:21	1
PCB-209L	75		30 - 140	06/13/18 11:00	06/23/18 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	79		40 - 125	06/13/18 11:00	06/23/18 17:21	1
PCB-111L	86		40 - 125	06/13/18 11:00	06/23/18 17:21	1
PCB-178L	82		40 - 125	06/13/18 11:00	06/23/18 17:21	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203-D

Date Collected: 06/02/18 11:33

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-7

Matrix: Solid

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.60	J q B	3.1	0.014	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-2	0.12	J q B	3.1	0.018	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-3	0.48	J q B	3.1	0.028	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-4	2.2	J B	6.2	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-5	ND		3.1	0.10	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-6	0.19	J	3.1	0.10	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-7	ND		3.1	0.096	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-8	0.64	J q B	6.2	0.098	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-9	ND		3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-10	0.23	J q	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-11	0.60	J q B	6.2	0.092	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-12	ND	C	6.2	0.092	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-13	ND	C12	6.2	0.092	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-14	ND		3.1	0.085	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-15	0.75	J B	3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-16	ND		3.1	0.077	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-17	3.0	J B	3.1	0.059	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-18	0.65	J q C	6.2	0.052	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-19	6.0		3.1	0.073	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-20	2.4	J C B	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-21	1.5	J C B	6.2	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-22	0.22	J	3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-23	ND		3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-24	ND		3.1	0.045	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-25	0.75	J	3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-26	0.30	J C B	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-27	0.71	J	3.1	0.044	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-28	2.4	J C20 B	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-29	0.30	J C26 B	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-30	0.65	J q C18	6.2	0.052	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-31	1.3	J B	6.2	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-32	4.5	B	3.1	0.041	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-33	1.5	J C21 B	6.2	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-34	ND		3.1	0.15	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-35	ND		3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-36	ND		3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-37	0.38	J B	3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-38	ND		3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-39	ND		3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-40	5.8	J C B	9.3	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-41	5.8	J C40 B	9.3	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-42	1.6	J	3.1	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-43	1.6	J C	6.2	0.23	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-44	54	C B	9.3	0.23	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-45	38	C	6.2	0.27	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-46	2.1	J	3.1	0.32	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-47	54	C44 B	9.3	0.23	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-48	0.73	J q	3.1	0.25	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-49	23	C B	6.2	0.21	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203-D

Lab Sample ID: 580-77769-7

Date Collected: 06/02/18 11:33

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	19	C B	6.2	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-51	38	C45	6.2	0.27	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-52	21	B	3.1	0.27	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-53	19	C50 B	6.2	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-54	6.4		3.1	0.025	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-55	ND		3.1	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-56	0.75	J q B	3.1	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-57	ND		3.1	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-58	ND		3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-59	2.7	J C B	9.3	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-60	ND		3.1	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-61	8.7	J C B	12	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-62	2.7	J C59 B	9.3	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-63	0.24	J	3.1	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-64	1.5	J B	3.1	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-65	54	C44 B	9.3	0.23	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-66	3.7	B	3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-67	ND		3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-68	0.38	J q	3.1	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-69	23	C49 B	6.2	0.21	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-70	8.7	J C61 B	12	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-71	5.8	J C40 B	9.3	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-72	ND		3.1	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-73	1.6	J C43	6.2	0.23	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-74	8.7	J C61 B	12	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-75	2.7	J C59 B	9.3	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-76	8.7	J C61 B	12	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-77	ND		3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-78	ND		3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-79	0.19	J q	3.1	0.15	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-80	ND		3.1	0.15	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-81	ND		3.1	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-82	3.0	J	3.1	0.095	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-83	20	C B	6.2	0.090	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-84	5.7	q B	3.1	0.099	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-85	3.8	J C	9.3	0.068	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-86	17	J C B	19	0.072	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-87	17	J C86 B	19	0.072	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-88	8.6	C B	6.2	0.086	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-89	ND		3.1	0.093	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-90	38	C B	9.3	0.073	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-91	8.6	C88 B	6.2	0.086	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-92	8.2	B	3.1	0.089	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-93	8.6	C	6.2	0.088	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-94	1.2	J q	3.1	0.093	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-95	30	B	3.1	0.091	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-96	1.2	J	3.1	0.070	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-97	17	J C86 B	19	0.072	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-98	3.7	J C	6.2	0.087	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203-D

Lab Sample ID: 580-77769-7

Date Collected: 06/02/18 11:33

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	20	C83 B	6.2	0.090	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-100	8.6	C93	6.2	0.088	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-101	38	C90 B	9.3	0.073	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-102	3.7	J C98	6.2	0.087	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-103	3.3	q B	3.1	0.080	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-104	0.84	J	3.1	0.063	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-105	5.6	B	3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-106	ND		3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-107	1.3	J B	3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-108	0.83	J C B	6.2	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-109	17	J C86 B	19	0.072	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-110	27	C B	6.2	0.060	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-111	ND		3.1	0.056	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-112	ND		3.1	0.061	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-113	38	C90 B	9.3	0.073	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-114	0.56	J B	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-115	27	C110 B	6.2	0.060	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-116	3.8	J C85	9.3	0.068	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-117	3.8	J C85	9.3	0.068	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-118	15	B	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-119	17	J C86 B	19	0.072	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-120	ND		3.1	0.055	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-121	ND		3.1	0.060	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-122	ND		3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-123	0.39	J q	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-124	0.83	J C108 B	6.2	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-125	17	J C86 B	19	0.072	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-126	ND		3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-127	ND		3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-128	5.5	J C	6.2	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-129	48	C B	12	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-130	2.9	J q	3.1	0.21	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-131	0.65	J q	3.1	0.22	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-132	18		3.1	0.21	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-133	1.5	J	3.1	0.20	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-134	4.4	J C B	6.2	0.21	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-135	25	C	6.2	0.058	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-136	9.3		3.1	0.042	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-137	1.5	J B	3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-138	48	C129 B	12	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-139	1.0	J q C	6.2	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-140	1.0	J q C139	6.2	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-141	11		3.1	0.19	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-142	ND		3.1	0.20	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-143	4.4	J C134 B	6.2	0.21	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-144	2.6	J	3.1	0.054	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-145	ND		3.1	0.042	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-146	9.9	B	3.1	0.17	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-147	54	C B	6.2	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203-D

Lab Sample ID: 580-77769-7

Date Collected: 06/02/18 11:33

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.35	J	3.1	0.056	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-149	54	C147 B	6.2	0.18	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-150	0.23	J q	3.1	0.037	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-151	25	C135	6.2	0.058	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-152	0.12	J q	3.1	0.040	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-153	49	C B	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-154	2.3	J	3.1	0.048	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-155	0.053	J q B	3.1	0.038	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-156	3.8	J C B	6.2	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-157	3.8	J C156 B	6.2	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-158	4.7		3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-159	0.55	J q	3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-160	48	C129 B	12	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-161	ND		3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-162	ND		3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-163	48	C129 B	12	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-164	3.7	q	3.1	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-165	ND		3.1	0.15	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-166	5.5	J C128	6.2	0.16	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-167	1.4	J	3.1	0.093	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-168	49	C153 B	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-169	ND		3.1	0.10	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-170	19		3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-171	6.7	C B	6.2	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-172	2.9	J B	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-173	6.7	C171 B	6.2	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-174	19		3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-175	0.80	J	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-176	2.2	J	3.1	0.074	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-177	11		3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-178	3.7	q B	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-179	8.2	B	3.1	0.081	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-180	42	C B	6.2	0.087	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-181	0.24	J q	3.1	0.10	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-182	ND		3.1	0.096	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-183	13	C	6.2	0.097	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-184	ND		3.1	0.082	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-185	13	C183	6.2	0.097	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-186	ND		3.1	0.079	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-187	22	B	3.1	0.10	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-188	ND		3.1	0.073	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-189	0.87	J	3.1	0.041	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-190	4.4		3.1	0.075	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-191	0.89	J q	3.1	0.076	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-192	ND		3.1	0.080	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-193	42	C180 B	6.2	0.087	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-194	10	B	3.1	0.33	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-195	4.8		3.1	0.37	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-196	4.8	q B	3.1	0.13	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203-D

Lab Sample ID: 580-77769-7

Date Collected: 06/02/18 11:33

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 30.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.36	J q	3.1	0.090	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-198	9.1	C	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-199	9.1	C198	6.2	0.14	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-200	1.2	J q	3.1	0.098	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-201	1.1	J q B	3.1	0.095	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-202	1.6	J	3.1	0.11	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-203	6.2	B	3.1	0.12	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-204	ND		3.1	0.098	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-205	0.48	J q B	3.1	0.24	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-206	14	q	3.1	0.39	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-207	ND		3.1	0.26	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-208	ND		3.1	0.28	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1
PCB-209	0.33	J q B	3.1	0.0063	ng/g	☼	06/13/18 11:00	06/23/18 18:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	71		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-3L	56		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-4L	79		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-15L	67		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-19L	83		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-37L	71		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-54L	94		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-77L	79		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-81L	84		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-104L	94		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-105L	85		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-114L	86		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-118L	90		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-123L	85		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-126L	85		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-155L	116		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-156L	85	C	30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-157L	85	C156	30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-167L	86		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-169L	84		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-170L	86		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-188L	90		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-189L	82		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-202L	109		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-205L	82		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-206L	84		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-208L	85		30 - 140	06/13/18 11:00	06/23/18 18:25	1
PCB-209L	74		30 - 140	06/13/18 11:00	06/23/18 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	80		40 - 125	06/13/18 11:00	06/23/18 18:25	1
PCB-111L	89		40 - 125	06/13/18 11:00	06/23/18 18:25	1
PCB-178L	86		40 - 125	06/13/18 11:00	06/23/18 18:25	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S176

Date Collected: 06/02/18 13:21

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-8

Matrix: Solid

Percent Solids: 54.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.47	B	0.25	0.0036	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-2	0.056	J q B	0.25	0.0043	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-3	0.20	J B	0.25	0.0054	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-4	1.0	B	0.49	0.012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-5	0.043	J q	0.25	0.0092	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-6	0.53		0.25	0.0091	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-7	0.078	J	0.25	0.0087	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-8	2.1	B	0.49	0.0089	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-9	0.13	J q B	0.25	0.010	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-10	0.051	J	0.25	0.0098	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-11	0.087	J B	0.49	0.0083	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-12	0.13	J q C	0.49	0.0083	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-13	0.13	J q C12	0.49	0.0083	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-14	ND		0.25	0.0077	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-15	0.68	B	0.25	0.0099	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-16	1.7	B	0.25	0.0086	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-17	2.0	B	0.25	0.0065	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-18	3.9	C	0.49	0.0058	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-19	0.46		0.25	0.0081	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-20	6.9	C B	0.49	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-21	3.2	C B	0.49	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-22	1.8		0.25	0.043	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-23	ND		0.25	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-24	0.048	J q	0.25	0.0050	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-25	0.63		0.25	0.040	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-26	0.93	C B	0.49	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-27	0.28		0.25	0.0049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-28	6.9	C20 B	0.49	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-29	0.93	C26 B	0.49	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-30	3.9	C18	0.49	0.0058	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-31	5.9	B	0.49	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-32	1.6	B	0.25	0.0045	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-33	3.2	C21 B	0.49	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-34	ND		0.25	0.044	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-35	0.10	J q	0.25	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-36	ND		0.25	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-37	1.4	B	0.25	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-38	ND		0.25	0.041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-39	0.13	J	0.25	0.037	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-40	9.3	C B	0.74	0.057	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-41	9.3	C40 B	0.74	0.057	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-42	5.3		0.25	0.058	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-43	1.2	q C	0.49	0.052	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-44	45	C B	0.74	0.051	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-45	2.4	C	0.49	0.060	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-46	0.94		0.25	0.070	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-47	45	C44 B	0.74	0.051	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-48	2.6		0.25	0.055	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-49	26	C B	0.49	0.046	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S176

Lab Sample ID: 580-77769-8

Date Collected: 06/02/18 13:21

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 54.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	3.5	C B	0.49	0.057	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-51	2.4	C45	0.49	0.060	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-52	110	B	0.25	0.060	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-53	3.5	C50 B	0.49	0.057	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-54	0.063	J	0.25	0.00053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-55	1.2		0.25	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-56	8.6	B	0.25	0.040	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-57	ND		0.25	0.040	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-58	ND		0.25	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-59	1.3	q C B	0.74	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-60	3.2	B	0.25	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-61	81	C B	0.99	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-62	1.3	q C59 B	0.74	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-63	0.88		0.25	0.034	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-64	12	B	0.25	0.036	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-65	45	C44 B	0.74	0.051	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-66	25	B	0.25	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-67	ND		0.25	0.037	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-68	0.36		0.25	0.035	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-69	26	C49 B	0.49	0.046	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-70	81	C61 B	0.99	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-71	9.3	C40 B	0.74	0.057	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-72	0.55		0.25	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-73	1.2	q C43	0.49	0.052	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-74	81	C61 B	0.99	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-75	1.3	q C59 B	0.74	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-76	81	C61 B	0.99	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-77	1.6	q	0.25	0.035	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-78	ND		0.25	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-79	1.4		0.25	0.033	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-80	ND		0.25	0.034	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-81	ND		0.25	0.037	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-82	21		0.25	0.0054	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-83	90	C B	0.49	0.0052	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-84	50	B	0.25	0.0056	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-85	25	C	0.74	0.0039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-86	110	C B	1.5	0.0041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-87	110	C86 B	1.5	0.0041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-88	23	C B	0.49	0.0049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-89	1.6		0.25	0.0053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-90	170	C B	0.74	0.0042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-91	23	C88 B	0.49	0.0049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-92	32	B	0.25	0.0051	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-93	3.0	C	0.49	0.0050	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-94	ND		0.25	0.0053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-95	150	B	0.25	0.0052	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-96	0.98		0.25	0.0040	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-97	110	C86 B	1.5	0.0041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-98	5.4	C	0.49	0.0050	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S176

Lab Sample ID: 580-77769-8

Date Collected: 06/02/18 13:21

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 54.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	90	C83 B	0.49	0.0052	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-100	3.0	C93	0.49	0.0050	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-101	170	C90 B	0.74	0.0042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-102	5.4	C98	0.49	0.0050	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-103	1.2	B	0.25	0.0046	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-104	ND		0.25	0.0036	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-105	52	B	0.25	0.14	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-106	ND		0.25	0.15	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-107	9.4	B	0.25	0.14	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-108	5.8	C B	0.49	0.15	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-109	110	C86 B	1.5	0.0041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-110	190	C B	0.49	0.0034	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-111	ND		0.25	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-112	1.2		0.25	0.0035	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-113	170	C90 B	0.74	0.0042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-114	3.6	B	0.25	0.14	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-115	190	C110 B	0.49	0.0034	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-116	25	C85	0.74	0.0039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-117	25	C85	0.74	0.0039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-118	130	B	0.25	0.13	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-119	110	C86 B	1.5	0.0041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-120	1.0		0.25	0.0031	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-121	ND		0.25	0.0034	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-122	2.4	B	0.25	0.16	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-123	2.1		0.25	0.13	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-124	5.8	C108 B	0.49	0.15	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-125	110	C86 B	1.5	0.0041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-126	0.33		0.25	0.15	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-127	0.43		0.25	0.14	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-128	27	C	0.49	0.048	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-129	150	C B	0.99	0.049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-130	11		0.25	0.065	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-131	3.0		0.25	0.066	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-132	56		0.25	0.064	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-133	2.4		0.25	0.062	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-134	11	C B	0.49	0.064	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-135	35	C	0.49	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-136	17		0.25	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-137	8.9	B	0.25	0.053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-138	150	C129 B	0.99	0.049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-139	3.4	C	0.49	0.055	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-140	3.4	C139	0.49	0.055	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-141	24		0.25	0.057	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-142	ND		0.25	0.062	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-143	11	C134 B	0.49	0.064	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-144	5.6		0.25	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-145	0.12	J q	0.25	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-146	18	B	0.25	0.052	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-147	97	C B	0.49	0.055	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S176

Lab Sample ID: 580-77769-8

Date Collected: 06/02/18 13:21

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 54.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.22	J	0.25	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-149	97	C147 B	0.49	0.055	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-150	0.20	J	0.25	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-151	35	C135	0.49	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-152	0.14	J q	0.25	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-153	91	C B	0.49	0.043	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-154	1.6		0.25	0.0014	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-155	ND		0.25	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-156	20	C B	0.49	0.053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-157	20	C156 B	0.49	0.053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-158	17		0.25	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-159	0.69		0.25	0.039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-160	150	C129 B	0.99	0.049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-161	ND		0.25	0.041	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-162	ND		0.25	0.038	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-163	150	C129 B	0.99	0.049	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-164	9.6		0.25	0.042	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-165	ND		0.25	0.046	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-166	27	C128	0.49	0.048	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-167	5.6		0.25	0.028	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-168	91	C153 B	0.49	0.043	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-169	ND		0.25	0.030	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-170	19		0.25	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-171	6.4	C B	0.49	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-172	3.0	B	0.25	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-173	6.4	C171 B	0.49	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-174	17		0.25	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-175	0.85		0.25	0.0015	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-176	2.2		0.25	0.0010	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-177	10		0.25	0.0017	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-178	3.0	B	0.25	0.0016	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-179	6.6	B	0.25	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-180	31	C B	0.49	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-181	0.41		0.25	0.0014	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-182	0.23	J q B	0.25	0.0014	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-183	11	C	0.49	0.0014	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-184	ND		0.25	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-185	11	C183	0.49	0.0014	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-186	ND		0.25	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-187	17	B	0.25	0.0014	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-188	ND		0.25	0.0010	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-189	0.75		0.25	0.012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-190	3.3		0.25	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-191	0.90		0.25	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-192	ND		0.25	0.0011	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-193	31	C180 B	0.49	0.0012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-194	5.0	B	0.25	0.026	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-195	2.1		0.25	0.030	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-196	2.7	B	0.25	0.0053	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S176

Lab Sample ID: 580-77769-8

Date Collected: 06/02/18 13:21

Matrix: Solid

Date Received: 06/04/18 14:25

Percent Solids: 54.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.22	J	0.25	0.0037	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-198	5.3	C	0.49	0.0056	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-199	5.3	C198	0.49	0.0056	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-200	0.66		0.25	0.0040	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-201	0.72	B	0.25	0.0039	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-202	1.0		0.25	0.0044	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-203	3.4	B	0.25	0.0050	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-204	ND		0.25	0.0040	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-205	0.28	B	0.25	0.020	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-206	2.8		0.25	0.017	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-207	0.28		0.25	0.012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-208	0.63		0.25	0.012	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
PCB-209	0.88	B	0.25	0.0032	ng/g	☼	06/13/18 11:00	06/25/18 01:55	5
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	70		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-3L	63		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-4L	80		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-15L	78		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-19L	85		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-37L	85		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-54L	95		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-77L	87		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-81L	84		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-104L	91		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-105L	87		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-114L	87		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-118L	92		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-123L	90		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-126L	88		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-155L	111		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-156L	85	C	30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-157L	85	C156	30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-167L	85		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-169L	84		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-170L	85		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-188L	91		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-189L	87		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-202L	103		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-205L	82		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-206L	83		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-208L	84		30 - 140				06/13/18 11:00	06/25/18 01:55	5
PCB-209L	74		30 - 140				06/13/18 11:00	06/25/18 01:55	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	78		40 - 125				06/13/18 11:00	06/25/18 01:55	5
PCB-111L	87		40 - 125				06/13/18 11:00	06/25/18 01:55	5
PCB-178L	89		40 - 125				06/13/18 11:00	06/25/18 01:55	5

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: MB 140-21154/16-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21154

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.00404	J	0.010	0.00012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-2	0.00375	J	0.010	0.00014	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-3	0.00304	J q	0.010	0.00019	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-4	0.000884	J q	0.020	0.00034	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-5	ND		0.010	0.00030	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-6	ND		0.010	0.00030	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-7	ND		0.010	0.00029	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-8	0.000867	J	0.020	0.00029	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-9	0.000568	J q	0.010	0.00033	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-10	ND		0.010	0.00033	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-11	0.00264	J q	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-12	ND	C	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-13	ND	C12	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-14	ND		0.010	0.00025	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-15	0.000517	J q	0.010	0.00039	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-16	0.000343	J q	0.010	0.000066	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-17	0.00106	J q	0.010	0.000050	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-18	ND	C	0.020	0.000044	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-19	ND		0.010	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-20	0.00106	J C	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-21	0.000894	J q C	0.020	0.00026	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-22	ND		0.010	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-23	ND		0.010	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-24	ND		0.010	0.000038	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-25	ND		0.010	0.00027	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-26	0.000924	J C	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-27	ND		0.010	0.000038	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-28	0.00106	J C20	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-29	0.000924	J C26	0.020	0.00028	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-30	ND	C18	0.020	0.000044	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-31	0.000868	J q	0.020	0.00026	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-32	0.000111	J q	0.010	0.000035	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-33	0.000894	J q C21	0.020	0.00026	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-34	ND		0.010	0.00029	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-35	ND		0.010	0.00027	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-36	ND		0.010	0.00025	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-37	0.000568	J q	0.010	0.00026	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-38	ND		0.010	0.00027	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-39	ND		0.010	0.00025	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-40	0.000470	J q C	0.030	0.00017	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-41	0.000470	J q C40	0.030	0.00017	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-42	ND		0.010	0.00017	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-43	ND	C	0.020	0.00015	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-44	0.00190	J C	0.030	0.00015	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-45	ND	C	0.020	0.00018	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-46	ND		0.010	0.00021	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-47	0.00190	J C44	0.030	0.00015	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-48	ND		0.010	0.00016	ng/g		06/13/18 11:00	06/22/18 02:34	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: MB 140-21154/16-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21154

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	0.000651	J q C	0.020	0.00014	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-50	0.000635	J C	0.020	0.00017	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-51	ND	C45	0.020	0.00018	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-52	0.00210	J q	0.010	0.00018	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-53	0.000635	J C50	0.020	0.00017	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-54	ND		0.010	0.000053	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-55	ND		0.010	0.00012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-56	0.000139	J q	0.010	0.00012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-57	ND		0.010	0.00012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-58	ND		0.010	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-59	0.000349	J q C	0.030	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-60	0.000126	J q	0.010	0.00012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-61	0.00193	J q C	0.040	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-62	0.000349	J q C59	0.030	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-63	ND		0.010	0.00010	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-64	0.000530	J	0.010	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-65	0.00190	J C44	0.030	0.00015	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-66	0.000415	J	0.010	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-67	ND		0.010	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-68	ND		0.010	0.00010	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-69	0.000651	J q C49	0.020	0.00014	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-70	0.00193	J q C61	0.040	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-71	0.000470	J q C40	0.030	0.00017	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-72	ND		0.010	0.00012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-73	ND	C43	0.020	0.00015	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-74	0.00193	J q C61	0.040	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-75	0.000349	J q C59	0.030	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-76	0.00193	J q C61	0.040	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-77	ND		0.010	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-78	ND		0.010	0.00011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-79	ND		0.010	0.000097	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-80	ND		0.010	0.00010	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-81	ND		0.010	0.00010	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-82	ND		0.010	0.000081	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-83	0.00124	J q C	0.020	0.000078	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-84	0.000300	J	0.010	0.000085	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-85	ND	C	0.030	0.000059	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-86	0.00379	J C	0.060	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-87	0.00379	J C86	0.060	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-88	0.000480	J q C	0.020	0.000074	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-89	ND		0.010	0.000080	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-90	0.00318	J C	0.030	0.000063	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-91	0.000480	J q C88	0.020	0.000074	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-92	0.000496	J q	0.010	0.000076	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-93	ND	C	0.020	0.000075	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-94	ND		0.010	0.000080	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-95	0.00223	J q	0.010	0.000078	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-96	ND		0.010	0.000060	ng/g		06/13/18 11:00	06/22/18 02:34	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: MB 140-21154/16-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21154

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	0.00379	J C86	0.060	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-98	ND	C	0.020	0.000075	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-99	0.00124	J q C83	0.020	0.000078	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-100	ND	C93	0.020	0.000075	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-101	0.00318	J C90	0.030	0.000063	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-102	ND	C98	0.020	0.000075	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-103	0.000398	J q	0.010	0.000069	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-104	ND		0.010	0.000054	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-105	0.000616	J q	0.010	0.000012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-106	ND		0.010	0.000013	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-107	0.000415	J	0.010	0.000013	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-108	0.000374	J q C	0.020	0.000014	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-109	0.00379	J C86	0.060	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-110	0.00255	J q C	0.020	0.000051	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-111	ND		0.010	0.000048	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-112	ND		0.010	0.000052	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-113	0.00318	J C90	0.030	0.000063	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-114	0.000151	J q	0.010	0.000012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-115	0.00255	J q C110	0.020	0.000051	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-116	ND	C85	0.030	0.000059	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-117	ND	C85	0.030	0.000059	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-118	0.00222	J	0.010	0.000013	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-119	0.00379	J C86	0.060	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-120	ND		0.010	0.000047	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-121	ND		0.010	0.000051	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-122	0.000588	J	0.010	0.000015	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-123	ND		0.010	0.000011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-124	0.000374	J q C108	0.020	0.000014	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-125	0.00379	J C86	0.060	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-126	ND		0.010	0.000014	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-127	ND		0.010	0.000013	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-128	ND	C	0.020	0.0000086	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-129	0.00272	J q C	0.040	0.0000087	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-130	ND		0.010	0.000012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-131	ND		0.010	0.000012	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-132	ND		0.010	0.000011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-133	ND		0.010	0.000011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-134	0.000260	J q C	0.020	0.000011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-135	ND	C	0.020	0.000086	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-136	ND		0.010	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-137	0.000165	J q	0.010	0.0000095	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-138	0.00272	J q C129	0.040	0.0000087	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-139	ND	C	0.020	0.0000098	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-140	ND	C139	0.020	0.0000098	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-141	ND		0.010	0.000010	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-142	ND		0.010	0.000011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-143	0.000260	J q C134	0.020	0.000011	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-144	ND		0.010	0.000080	ng/g		06/13/18 11:00	06/22/18 02:34	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: MB 140-21154/16-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21154

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.010	0.000062	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-146	0.000133	J q	0.010	0.0000092	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-147	0.00128	J q C	0.020	0.0000098	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-148	ND		0.010	0.000083	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-149	0.00128	J q C147	0.020	0.0000098	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-150	ND		0.010	0.000056	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-151	ND	C135	0.020	0.000086	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-152	ND		0.010	0.000060	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-153	0.00177	J C	0.020	0.0000076	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-154	ND		0.010	0.000072	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-155	0.000206	J q	0.010	0.000057	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-156	0.000189	J q C	0.020	0.0000090	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-157	0.000189	J q C156	0.020	0.0000090	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-158	ND		0.010	0.0000068	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-159	ND		0.010	0.0000070	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-160	0.00272	J q C129	0.040	0.0000087	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-161	ND		0.010	0.0000072	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-162	ND		0.010	0.0000069	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-163	0.00272	J q C129	0.040	0.0000087	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-164	ND		0.010	0.0000074	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-165	ND		0.010	0.0000083	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-166	ND	C128	0.020	0.0000086	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-167	ND		0.010	0.0000053	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-168	0.00177	J C153	0.020	0.0000076	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-169	ND		0.010	0.0000054	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-170	ND		0.010	0.000037	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-171	0.000242	J q C	0.020	0.000038	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-172	0.000117	J q	0.010	0.000037	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-173	0.000242	J q C171	0.020	0.000038	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-174	ND		0.010	0.000039	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-175	ND		0.010	0.000035	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-176	ND		0.010	0.000024	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-177	ND		0.010	0.000039	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-178	0.0000608	J q	0.010	0.000036	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-179	0.0000456	J q	0.010	0.000027	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-180	0.00105	J q C	0.020	0.000029	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-181	ND		0.010	0.000033	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-182	0.000143	J q	0.010	0.000031	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-183	ND	C	0.020	0.000032	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-184	ND		0.010	0.000027	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-185	ND	C183	0.020	0.000032	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-186	ND		0.010	0.000026	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-187	0.000179	J q	0.010	0.000033	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-188	0.0000471	J q	0.010	0.000025	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-189	ND		0.010	0.000049	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-190	ND		0.010	0.000025	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-191	ND		0.010	0.000025	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-192	ND		0.010	0.000026	ng/g		06/13/18 11:00	06/22/18 02:34	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: MB 140-21154/16-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21154

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	0.00105	J q C180	0.020	0.000029	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-194	0.000289	J q	0.010	0.000042	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-195	ND		0.010	0.000047	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-196	0.000290	J q	0.010	0.000063	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-197	ND		0.010	0.000044	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-198	ND	C	0.020	0.000067	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-199	ND	C198	0.020	0.000067	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-200	ND		0.010	0.000048	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-201	0.000253	J q	0.010	0.000046	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-202	ND		0.010	0.000052	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-203	0.000133	J q	0.010	0.000059	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-204	0.000182	J q	0.010	0.000048	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-205	0.0000666	J q	0.010	0.000032	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-206	ND		0.010	0.000097	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-207	ND		0.010	0.000063	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-208	ND		0.010	0.000068	ng/g		06/13/18 11:00	06/22/18 02:34	1
PCB-209	0.000343	J q	0.010	0.000039	ng/g		06/13/18 11:00	06/22/18 02:34	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	57		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-3L	54		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-4L	68		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-15L	59		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-19L	71		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-37L	70		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-54L	84		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-77L	75		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-81L	75		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-104L	84		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-105L	80		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-114L	78		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-118L	82		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-123L	79		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-126L	81		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-155L	104		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-156L	84	C	30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-157L	84	C156	30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-167L	82		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-169L	85		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-170L	83		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-188L	79		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-189L	77		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-202L	101		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-205L	78		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-206L	79		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-208L	78		30 - 140	06/13/18 11:00	06/22/18 02:34	1
PCB-209L	74		30 - 140	06/13/18 11:00	06/22/18 02:34	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: MB 140-21154/16-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21154

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	79		40 - 125	06/13/18 11:00	06/22/18 02:34	1
PCB-111L	83		40 - 125	06/13/18 11:00	06/22/18 02:34	1
PCB-178L	82		40 - 125	06/13/18 11:00	06/22/18 02:34	1

Lab Sample ID: LCS 140-21154/17-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21154

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	0.500	0.492		ng/g		98	50 - 150
PCB-3	0.500	0.492		ng/g		98	50 - 150
PCB-4	0.500	0.438		ng/g		88	50 - 150
PCB-15	0.500	0.476		ng/g		95	50 - 150
PCB-19	0.500	0.441		ng/g		88	50 - 150
PCB-37	0.500	0.499		ng/g		100	50 - 150
PCB-54	0.500	0.499		ng/g		100	50 - 150
PCB-77	0.500	0.422		ng/g		84	50 - 150
PCB-81	0.500	0.455		ng/g		91	50 - 150
PCB-104	0.500	0.466		ng/g		93	50 - 150
PCB-105	0.500	0.496		ng/g		99	50 - 150
PCB-114	0.500	0.527		ng/g		105	50 - 150
PCB-118	0.500	0.500		ng/g		100	50 - 150
PCB-123	0.500	0.468		ng/g		94	50 - 150
PCB-126	0.500	0.483		ng/g		97	50 - 150
PCB-155	0.500	0.466		ng/g		93	50 - 150
PCB-156	1.00	0.934	C	ng/g		93	50 - 150
PCB-157	1.00	0.934	C156	ng/g		93	50 - 150
PCB-167	0.500	0.486		ng/g		97	50 - 150
PCB-169	0.500	0.463		ng/g		93	50 - 150
PCB-188	0.500	0.482		ng/g		96	50 - 150
PCB-189	0.500	0.504		ng/g		101	50 - 150
PCB-202	0.500	0.427		ng/g		85	50 - 150
PCB-205	0.500	0.470		ng/g		94	50 - 150
PCB-206	0.500	0.482		ng/g		96	50 - 150
PCB-208	0.500	0.475		ng/g		95	50 - 150
PCB-209	0.500	0.472		ng/g		94	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	58		30 - 140
PCB-3L	57		30 - 140
PCB-4L	70		30 - 140
PCB-15L	68		30 - 140
PCB-19L	75		30 - 140
PCB-37L	74		30 - 140
PCB-54L	89		30 - 140
PCB-77L	80		30 - 140
PCB-81L	76		30 - 140
PCB-104L	81		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: LCS 140-21154/17-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21154

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-105L	80		30 - 140
PCB-114L	80		30 - 140
PCB-118L	83		30 - 140
PCB-123L	81		30 - 140
PCB-126L	83		30 - 140
PCB-155L	103		30 - 140
PCB-156L	84	C	30 - 140
PCB-157L	84	C156	30 - 140
PCB-167L	82		30 - 140
PCB-169L	85		30 - 140
PCB-170L	82		30 - 140
PCB-188L	78		30 - 140
PCB-189L	79		30 - 140
PCB-202L	99		30 - 140
PCB-205L	78		30 - 140
PCB-206L	81		30 - 140
PCB-208L	79		30 - 140
PCB-209L	72		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	76		40 - 125
PCB-111L	85		40 - 125
PCB-178L	81		40 - 125

Lab Sample ID: LCSD 140-21154/18-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21154

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1	0.500	0.495		ng/g		99	50 - 150	1	50
PCB-3	0.500	0.507		ng/g		101	50 - 150	3	50
PCB-4	0.500	0.435		ng/g		87	50 - 150	1	50
PCB-15	0.500	0.494		ng/g		99	50 - 150	4	50
PCB-19	0.500	0.441		ng/g		88	50 - 150	0	50
PCB-37	0.500	0.480		ng/g		96	50 - 150	4	50
PCB-54	0.500	0.523		ng/g		105	50 - 150	5	50
PCB-77	0.500	0.408		ng/g		82	50 - 150	3	50
PCB-81	0.500	0.471		ng/g		94	50 - 150	4	50
PCB-104	0.500	0.457		ng/g		91	50 - 150	2	50
PCB-105	0.500	0.480		ng/g		96	50 - 150	3	50
PCB-114	0.500	0.513		ng/g		103	50 - 150	3	50
PCB-118	0.500	0.516		ng/g		103	50 - 150	3	50
PCB-123	0.500	0.470		ng/g		94	50 - 150	0	50
PCB-126	0.500	0.478		ng/g		96	50 - 150	1	50
PCB-155	0.500	0.476		ng/g		95	50 - 150	2	50
PCB-156	1.00	0.920	C	ng/g		92	50 - 150	2	50
PCB-157	1.00	0.920	C156	ng/g		92	50 - 150	2	50
PCB-167	0.500	0.490		ng/g		98	50 - 150	1	50

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: LCSD 140-21154/18-B

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21154

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-169	0.500	0.466		ng/g		93	50 - 150	1	50
PCB-188	0.500	0.500		ng/g		100	50 - 150	4	50
PCB-189	0.500	0.495		ng/g		99	50 - 150	2	50
PCB-202	0.500	0.412		ng/g		82	50 - 150	3	50
PCB-205	0.500	0.461		ng/g		92	50 - 150	2	50
PCB-206	0.500	0.473		ng/g		95	50 - 150	2	50
PCB-208	0.500	0.468		ng/g		94	50 - 150	1	50
PCB-209	0.500	0.458		ng/g		92	50 - 150	3	50

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
PCB-1L	62		30 - 140
PCB-3L	59		30 - 140
PCB-4L	74		30 - 140
PCB-15L	70		30 - 140
PCB-19L	73		30 - 140
PCB-37L	75		30 - 140
PCB-54L	85		30 - 140
PCB-77L	79		30 - 140
PCB-81L	78		30 - 140
PCB-104L	81		30 - 140
PCB-105L	82		30 - 140
PCB-114L	80		30 - 140
PCB-118L	83		30 - 140
PCB-123L	81		30 - 140
PCB-126L	84		30 - 140
PCB-155L	99		30 - 140
PCB-156L	83	C	30 - 140
PCB-157L	83	C156	30 - 140
PCB-167L	79		30 - 140
PCB-169L	81		30 - 140
PCB-170L	81		30 - 140
PCB-188L	77		30 - 140
PCB-189L	78		30 - 140
PCB-202L	100		30 - 140
PCB-205L	78		30 - 140
PCB-206L	79		30 - 140
PCB-208L	79		30 - 140
PCB-209L	73		30 - 140

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
PCB-28L	75		40 - 125
PCB-111L	84		40 - 125
PCB-178L	81		40 - 125

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: 580-77769-5 MS

Matrix: Solid

Analysis Batch: 21445

Client Sample ID: PDI-SG-S015

Prep Type: Total/NA

Prep Batch: 21154

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	0.0059	J B	0.648	0.631		ng/g	☼	96	50 - 150
PCB-3	0.0078	J B q	0.648	0.647		ng/g	☼	99	50 - 150
PCB-4	0.024	J B q	0.648	0.593		ng/g	☼	88	50 - 150
PCB-15	0.054	J B	0.648	0.641		ng/g	☼	90	50 - 150
PCB-19	0.021	J	0.648	0.616		ng/g	☼	92	50 - 150
PCB-37	0.043	J B q	0.648	0.692		ng/g	☼	100	50 - 150
PCB-54	0.0047	J q	0.648	0.643		ng/g	☼	98	50 - 150
PCB-77	0.020	J q	0.648	0.585		ng/g	☼	87	50 - 150
PCB-81	ND		0.648	0.568		ng/g	☼	88	50 - 150
PCB-104	ND		0.648	0.590		ng/g	☼	91	50 - 150
PCB-105	0.15	B	0.648	0.772		ng/g	☼	96	50 - 150
PCB-114	0.012	J B	0.648	0.666		ng/g	☼	101	50 - 150
PCB-118	0.33	B	0.648	0.933		ng/g	☼	93	50 - 150
PCB-123	0.0066	J q	0.648	0.604		ng/g	☼	92	50 - 150
PCB-126	ND		0.648	0.637		ng/g	☼	98	50 - 150
PCB-155	ND		0.648	0.581		ng/g	☼	90	50 - 150
PCB-156	0.057	J C B	1.30	1.21	C	ng/g	☼	89	50 - 150
PCB-157	0.057	J C156 B	1.30	1.21	C156	ng/g	☼	89	50 - 150
PCB-167	0.017	J q	0.648	0.618		ng/g	☼	93	50 - 150
PCB-169	ND		0.648	0.580		ng/g	☼	90	50 - 150
PCB-188	ND		0.648	0.622		ng/g	☼	96	50 - 150
PCB-189	0.0051	J q	0.648	0.642		ng/g	☼	98	50 - 150
PCB-202	0.066	J q	0.648	0.565		ng/g	☼	77	50 - 150
PCB-205	0.0067	J B	0.648	0.604		ng/g	☼	92	50 - 150
PCB-206	0.20		0.648	0.683	q	ng/g	☼	75	50 - 150
PCB-208	0.092	J	0.648	0.594		ng/g	☼	77	50 - 150
PCB-209	0.082	J B	0.648	0.661		ng/g	☼	89	50 - 150

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
PCB-1L	54		30 - 140
PCB-3L	54		30 - 140
PCB-4L	76		30 - 140
PCB-15L	78		30 - 140
PCB-19L	77		30 - 140
PCB-37L	82		30 - 140
PCB-54L	95		30 - 140
PCB-77L	81		30 - 140
PCB-81L	81		30 - 140
PCB-104L	90		30 - 140
PCB-105L	83		30 - 140
PCB-114L	83		30 - 140
PCB-118L	87		30 - 140
PCB-123L	86		30 - 140
PCB-126L	85		30 - 140
PCB-155L	112		30 - 140
PCB-156L	80	C	30 - 140
PCB-157L	80	C156	30 - 140
PCB-167L	82		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77769-3

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

Lab Sample ID: 580-77769-5 MS

Matrix: Solid

Analysis Batch: 21445

Client Sample ID: PDI-SG-S015

Prep Type: Total/NA

Prep Batch: 21154

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
PCB-169L	82		30 - 140
PCB-170L	82		30 - 140
PCB-188L	83		30 - 140
PCB-189L	82		30 - 140
PCB-202L	100		30 - 140
PCB-205L	77		30 - 140
PCB-206L	83		30 - 140
PCB-208L	83		30 - 140
PCB-209L	76		30 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
PCB-28L	78		40 - 125
PCB-111L	85		40 - 125
PCB-178L	82		40 - 125

Lab Sample ID: 580-77769-5 MSD

Matrix: Solid

Analysis Batch: 21445

Client Sample ID: PDI-SG-S015

Prep Type: Total/NA

Prep Batch: 21154

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1	0.0059	J B	0.645	0.625		ng/g	☼	96	50 - 150	1	50
PCB-3	0.0078	J B q	0.645	0.674		ng/g	☼	103	50 - 150	4	50
PCB-4	0.024	J B q	0.645	0.583		ng/g	☼	87	50 - 150	2	50
PCB-15	0.054	J B	0.645	0.639		ng/g	☼	91	50 - 150	0	50
PCB-19	0.021	J	0.645	0.635		ng/g	☼	95	50 - 150	3	50
PCB-37	0.043	J B q	0.645	0.700		ng/g	☼	102	50 - 150	1	50
PCB-54	0.0047	J q	0.645	0.651		ng/g	☼	100	50 - 150	1	50
PCB-77	0.020	J q	0.645	0.578		ng/g	☼	86	50 - 150	1	50
PCB-81	ND		0.645	0.563		ng/g	☼	87	50 - 150	1	50
PCB-104	ND		0.645	0.604		ng/g	☼	94	50 - 150	2	50
PCB-105	0.15	B	0.645	0.744		ng/g	☼	92	50 - 150	4	50
PCB-114	0.012	J B	0.645	0.662		ng/g	☼	101	50 - 150	1	50
PCB-118	0.33	B	0.645	0.964		ng/g	☼	99	50 - 150	3	50
PCB-123	0.0066	J q	0.645	0.600		ng/g	☼	92	50 - 150	1	50
PCB-126	ND		0.645	0.620		ng/g	☼	96	50 - 150	3	50
PCB-155	ND		0.645	0.571		ng/g	☼	89	50 - 150	2	50
PCB-156	0.057	J C B	1.29	1.21	C	ng/g	☼	89	50 - 150	0	50
PCB-157	0.057	J C156 B	1.29	1.21	C156	ng/g	☼	89	50 - 150	0	50
PCB-167	0.017	J q	0.645	0.618		ng/g	☼	93	50 - 150	0	50
PCB-169	ND		0.645	0.583		ng/g	☼	90	50 - 150	0	50
PCB-188	ND		0.645	0.625		ng/g	☼	97	50 - 150	1	50
PCB-189	0.0051	J q	0.645	0.644		ng/g	☼	99	50 - 150	0	50
PCB-202	0.066	J q	0.645	0.562		ng/g	☼	77	50 - 150	0	50
PCB-205	0.0067	J B	0.645	0.595		ng/g	☼	91	50 - 150	1	50
PCB-206	0.20		0.645	0.739		ng/g	☼	84	50 - 150	8	50
PCB-208	0.092	J	0.645	0.606		ng/g	☼	80	50 - 150	2	50
PCB-209	0.082	J B	0.645	0.680		ng/g	☼	93	50 - 150	3	50

TestAmerica Seattle

QC Sample Results

Client: AECOM

TestAmerica Job ID: 580-77769-3

Project/Site: Portland Harbor Pre-Remedial Design

<i>Isotope Dilution</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
PCB-1L	55		30 - 140
PCB-3L	53		30 - 140
PCB-4L	75		30 - 140
PCB-15L	77		30 - 140
PCB-19L	76		30 - 140
PCB-37L	80		30 - 140
PCB-54L	95		30 - 140
PCB-77L	86		30 - 140
PCB-81L	84		30 - 140
PCB-104L	89		30 - 140
PCB-105L	84		30 - 140
PCB-114L	83		30 - 140
PCB-118L	86		30 - 140
PCB-123L	86		30 - 140
PCB-126L	85		30 - 140
PCB-155L	110		30 - 140
PCB-156L	80	C	30 - 140
PCB-157L	80	C156	30 - 140
PCB-167L	83		30 - 140
PCB-169L	83		30 - 140
PCB-170L	82		30 - 140
PCB-188L	84		30 - 140
PCB-189L	83		30 - 140
PCB-202L	103		30 - 140
PCB-205L	78		30 - 140
PCB-206L	84		30 - 140
PCB-208L	83		30 - 140
PCB-209L	77		30 - 140
<i>Surrogate</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
PCB-28L	77		40 - 125
PCB-111L	86		40 - 125
PCB-178L	85		40 - 125

Lab Chronicle

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S109

Date Collected: 06/01/18 11:25

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-1

Matrix: Solid

Percent Solids: 62.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21445	06/23/18 04:07	PMP	TAL KNX

Client Sample ID: PDI-SG-S113

Date Collected: 06/01/18 11:15

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-2

Matrix: Solid

Percent Solids: 56.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21425	06/22/18 21:27	MSD	TAL KNX

Client Sample ID: PDI-SG-S116

Date Collected: 06/01/18 09:55

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-3

Matrix: Solid

Percent Solids: 64.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21445	06/23/18 05:10	PMP	TAL KNX

Client Sample ID: PDI-SG-S116-D

Date Collected: 06/01/18 09:55

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-4

Matrix: Solid

Percent Solids: 64.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21445	06/23/18 06:14	PMP	TAL KNX

Client Sample ID: PDI-SG-S015

Date Collected: 06/02/18 11:45

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-5

Matrix: Solid

Percent Solids: 37.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		10	21478	06/25/18 13:22	MSD	TAL KNX

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-77769-3

Client Sample ID: PDI-SG-S203

Date Collected: 06/02/18 11:32

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-6

Matrix: Solid

Percent Solids: 31.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21450	06/23/18 17:21	MSD	TAL KNX

Client Sample ID: PDI-SG-S203-D

Date Collected: 06/02/18 11:33

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-7

Matrix: Solid

Percent Solids: 30.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21450	06/23/18 18:25	MSD	TAL KNX

Client Sample ID: PDI-SG-S176

Date Collected: 06/02/18 13:21

Date Received: 06/04/18 14:25

Lab Sample ID: 580-77769-8

Matrix: Solid

Percent Solids: 54.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21154	06/13/18 11:00	CLI	TAL KNX
Total/NA	Cleanup	Split			21239	06/14/18 19:35	SMM	TAL KNX
Total/NA	Analysis	1668A		5	21460	06/25/18 01:55	LKM	TAL KNX

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM

TestAmerica Job ID: 580-77769-3

Project/Site: Portland Harbor Pre-Remedial Design

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
California	State Program	9	2901	11-05-18
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
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	10-31-18
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	07-31-18
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	11-22-18
Oklahoma	State Program	6	9415	08-31-18
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	08-31-18
US Fish & Wildlife	Federal		LE-058448-0	07-31-18
USDA	Federal		P330-16-00262	08-20-19
Utah	NELAP	8	TN00009	07-31-18
Virginia	NELAP	3	460176	09-14-18
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	08-31-18

TestAmerica Seattle

Sample Summary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77769-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-77769-1	PDI-SG-S109	Solid	06/01/18 11:25	06/04/18 14:25
580-77769-2	PDI-SG-S113	Solid	06/01/18 11:15	06/04/18 14:25
580-77769-3	PDI-SG-S116	Solid	06/01/18 09:55	06/04/18 14:25
580-77769-4	PDI-SG-S116-D	Solid	06/01/18 09:55	06/04/18 14:25
580-77769-5	PDI-SG-S015	Solid	06/02/18 11:45	06/04/18 14:25
580-77769-6	PDI-SG-S203	Solid	06/02/18 11:32	06/04/18 14:25
580-77769-7	PDI-SG-S203-D	Solid	06/02/18 11:33	06/04/18 14:25
580-77769-8	PDI-SG-S176	Solid	06/02/18 13:21	06/04/18 14:25

Revised 6/6/18

TestAmerica-Seattle		SURFACE SEDIMENT CHAIN OF CUSTODY		Site Contact: Jennifer Ray		COC No. 2	
Client Contact		Project Contact: Amy Dahl / Chebsey Cook		Laboratory Contact: Elaine Walker		Carrier: Courier	
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: Surface Sediment-SMA		Tel: (206) 438-2261 / (206) 438-2010 Analysis Turnaround Time Calendar (C) or Work Days (W) ☒ 21 days ☐ Other		Archival Archive -20 C		580-77769 Chain of Custody	
Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Sample Specific Notes:
PDI-SG-S109	6/1/2018	11:25	SS		MM	5	
PDI-SG-S113	6/1/2018	11:15	SS		MT	5	
PDI-SG-S116	6/1/2018	9:55	SS		MT	5	
PDI-SG-S116-D	6/1/2018	9:55	SS		MT	4	
PDI-SG-S015	6/2/2018	11:15	SS	MS/MSD	LS	9	
PDI-SG-S203	6/2/2018	11:32	SS		MM	5	
PDI-SG-S009-B-S203-D	6/2/2018	11:33	SS		MM	4	
PDI-SG-S176	6/2/2018	13:21	SS		MM	5	
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 (filtered) Per Tacoma 6/6/18 (P)							
Special Instructions/QC Requirements & Comments: Separate reports for each lab SMA Study samples - log in separately from SS Study samples.							
Relinquished by: <i>[Signature]</i>	Company: GEOSyntec	Date/Time: 6/4/18 1350	Received by: <i>[Signature]</i>	Company: M.E.	Date/Time: 6/4/18 1350	Date/Time: 6/4/18 1350	
Relinquished by: <i>[Signature]</i>	Company: M.E.	Date/Time: 6/4/18 1425	Received by: <i>[Signature]</i>	Company: JAPOR	Date/Time: 6/4/18 1425	Date/Time: 6/4/18 1425	
Relinquished by: <i>[Signature]</i>	Company: JAPOR	Date/Time: 6/4/18 1700	Received by: <i>[Signature]</i>	Company: JAPOR	Date/Time: 6/4/18 1700	Date/Time: 6/4/18 1700	

THE LEADER IS EQUIPMENTAL THE 20

Ver: 09/20/2016

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Verf. 09/20/2010

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
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 : <u>5568</u> Correction factor: <u>0.0</u>	/			☐ 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	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			☐ Sampler Not Listed on COC	pH test strip lot number: _____
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	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			☐ Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?	/		/	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			/	☐ Headspace (VOA only)	Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	☐ Residual Chlorine	Time: _____
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	
Project #: _____ PM Instructions: _____					

QA026R30.doc, 080916

Date: 6-6-18

Sample Receiving Associate: [Signature]



Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-77769-3

Login Number: 77769

List Source: TestAmerica Seattle

List Number: 1

Creator: O'Connell, Jason I

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (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: 580-77769-3

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)
580-77769-1	PDI-SG-S109	54	59	73	77	240 *	82	149 S *	86
580-77769-2	PDI-SG-S113	56	58	76	82	91	84	113	87
580-77769-3	PDI-SG-S116	54	57	71	78	90	80	108 S	82
580-77769-4	PDI-SG-S116-D	52	58	72	82	85	84	102	84
580-77769-5	PDI-SG-S015	63	55	76	72	81	80	90	84
580-77769-5 MS	PDI-SG-S015	54	54	76	78	77	82	95	81
580-77769-5 MSD	PDI-SG-S015	55	53	75	77	76	80	95	86
580-77769-6	PDI-SG-S203	57	56	77	78	80	85	101	87
580-77769-7	PDI-SG-S203-D	71	56	79	67	83	71	94	79
580-77769-8	PDI-SG-S176	70	63	80	78	85	85	95	87
LCS 140-21154/17-B	Lab Control Sample	58	57	70	68	75	74	89	80
LCSD 140-21154/18-B	Lab Control Sample Dup	62	59	74	70	73	75	85	79
MB 140-21154/16-B	Method Blank	57	54	68	59	71	70	84	75

		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)
580-77769-1	PDI-SG-S109	85	86	81	80	81	82	84	110
580-77769-2	PDI-SG-S113	85	88	86	85	88	89	88	111
580-77769-3	PDI-SG-S116	81	84	81	80	84	82	82	105
580-77769-4	PDI-SG-S116-D	82	88	86	85	88	86	88	109
580-77769-5	PDI-SG-S015	81	88	82	83	86	85	84	108
580-77769-5 MS	PDI-SG-S015	81	90	83	83	87	86	85	112
580-77769-5 MSD	PDI-SG-S015	84	89	84	83	86	86	85	110
580-77769-6	PDI-SG-S203	84	91	87	87	90	88	87	114
580-77769-7	PDI-SG-S203-D	84	94	85	86	90	85	85	116
580-77769-8	PDI-SG-S176	84	91	87	87	92	90	88	111
LCS 140-21154/17-B	Lab Control Sample	76	81	80	80	83	81	83	103
LCSD 140-21154/18-B	Lab Control Sample Dup	78	81	82	80	83	81	84	99
MB 140-21154/16-B	Method Blank	75	84	80	78	82	79	81	104

		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)
580-77769-1	PDI-SG-S109	80 C	80 C156	80	81	80	79	78	98
580-77769-2	PDI-SG-S113	86 C	86 C156	86	86	84	85	84	103
580-77769-3	PDI-SG-S116	79 C	79 C156	80	78	80	82	77	99
580-77769-4	PDI-SG-S116-D	82 C	82 C156	84	84	85	85	82	104
580-77769-5	PDI-SG-S015	81 C	81 C156	82	81	85	86	82	99
580-77769-5 MS	PDI-SG-S015	80 C	80 C156	82	82	82	83	82	100
580-77769-5 MSD	PDI-SG-S015	80 C	80 C156	83	83	82	84	83	103
580-77769-6	PDI-SG-S203	85 C	85 C156	85	84	84	87	82	106
580-77769-7	PDI-SG-S203-D	85 C	85 C156	86	84	86	90	82	109
580-77769-8	PDI-SG-S176	85 C	85 C156	85	84	85	91	87	103
LCS 140-21154/17-B	Lab Control Sample	84 C	84 C156	82	85	82	78	79	99
LCSD 140-21154/18-B	Lab Control Sample Dup	83 C	83 C156	79	81	81	77	78	100
MB 140-21154/16-B	Method Blank	84 C	84 C156	82	85	83	79	77	101

TestAmerica Seattle

Isotope Dilution Summary

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

TestAmerica Job ID: 580-77769-3

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)			
		PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-77769-1	PDI-SG-S109	75	79	78	72
580-77769-2	PDI-SG-S113	79	85	84	76
580-77769-3	PDI-SG-S116	74	80	79	72
580-77769-4	PDI-SG-S116-D	79	83	83	76
580-77769-5	PDI-SG-S015	77	79	78	71
580-77769-5 MS	PDI-SG-S015	77	83	83	76
580-77769-5 MSD	PDI-SG-S015	78	84	83	77
580-77769-6	PDI-SG-S203	79	83	83	75
580-77769-7	PDI-SG-S203-D	82	84	85	74
580-77769-8	PDI-SG-S176	82	83	84	74
LCS 140-21154/17-B	Lab Control Sample	78	81	79	72
LCSD 140-21154/18-B	Lab Control Sample Dup	78	79	79	73
MB 140-21154/16-B	Method Blank	78	79	78	74

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

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