

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 580-78278-3

Client Project/Site: Portland Harbor Pre-Remedial Design

For:

AECOM
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Authorized for release by:
7/27/2018 2:09:41 PM

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

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



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Case Narrative

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

TestAmerica Job ID: 580-78278-3

Job ID: 580-78278-3

Laboratory: TestAmerica Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Portland Harbor Pre-Remedial Design

Report Number: 580-78278-3

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

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

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

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

RECEIPT

Four samples were received on 6/22/2018 1:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2° 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-B096-BL1 (580-78278-1), PDI-SG-B096-BL1-D (580-78278-2) and PDI-SG-B155-BL1 (580-78278-3) were analyzed for polychlorinated biphenyls congeners (PCBs) in accordance with EPA Method 1668A. The samples were prepared on 06/27/2018 and analyzed on 07/13/2018 and 07/16/2018.

Several analytes were detected in method blank MB 140-21553/16-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.

Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: PDI-SG-B096-BL1 (580-78278-1).

Sample PDI-SG-B155-BL1 (580-78278-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

PCB CONGENERS - Rinse Blank

Sample PDI-RB-VV-20181621 (580-78278-4) was analyzed for PCB Congeners in accordance with 1668A. The samples were prepared on 07/02/2018 and analyzed on 07/09/2018.

Several analytes were detected in method blank MB 140-21673/7-A at levels that were above the method detection limit but below the

Case Narrative

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

TestAmerica Job ID: 580-78278-3

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Laboratory: TestAmerica Seattle (Continued)

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.

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

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Definitions/Glossary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-78278-3

Qualifiers

Dioxin

Qualifier	Qualifier Description
C93	The compound co-eluted with PCB-93
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.
B	Compound was found in the blank and sample.
C90	The compound co-eluted with PCB-90
C98	The compound co-eluted with PCB-98
C	The compound co-eluted with other compounds
C86	The compound co-eluted with PCB-86
C110	The compound co-eluted with PCB-110
C85	The compound co-eluted with PCB-85
C108	The compound co-eluted with PCB-108
C12	The compound co-eluted with PCB-12
C129	The compound co-eluted with PCB-129
C139	The compound co-eluted with PCB-139
C134	The compound co-eluted with PCB-134
C147	The compound co-eluted with PCB-147
C135	The compound co-eluted with PCB-135
C156	The compound co-eluted with PCB-156
C128	The compound co-eluted with PCB-128
C153	The compound co-eluted with PCB-153
C171	The compound co-eluted with PCB-171
C183	The compound co-eluted with PCB-183
C180	The compound co-eluted with PCB-180
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C26	The compound co-eluted with PCB-26
C18	The compound co-eluted with PCB-18
C21	The compound co-eluted with PCB-21
C40	The compound co-eluted with PCB-40
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C49	The compound co-eluted with PCB-49
C61	The compound co-eluted with PCB-61
C43	The compound co-eluted with PCB-43
C88	The compound co-eluted with PCB-88
C83	The compound co-eluted with PCB-83

Glossary

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

TestAmerica Seattle

Definitions/Glossary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-78278-3

Glossary (Continued)

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

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1

Lab Sample ID: 580-78278-1

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.012	0.00040	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-2	0.0042	J q	0.012	0.00044	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-3	0.0026	J q	0.012	0.00047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-4	0.012	J q	0.025	0.0034	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-5	ND		0.012	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-6	0.0054	J q	0.012	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-7	ND		0.012	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-8	0.018	J	0.025	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-9	ND		0.012	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-10	ND		0.012	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-11	0.048	B q	0.025	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-12	0.0039	J C q	0.025	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-13	0.0039	J C12 q	0.025	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-14	ND		0.012	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-15	0.018	q	0.012	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-16	0.013	q	0.012	0.00053	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-17	0.027		0.012	0.00048	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-18	0.038	C q	0.025	0.00042	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-19	0.013	q	0.012	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-20	0.086	C B	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-21	0.039	C	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-22	0.028		0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-23	ND		0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-24	0.0013	J q	0.012	0.00040	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-25	0.0081	J	0.012	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-26	0.015	J C	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-27	0.0042	J q	0.012	0.00035	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-28	0.086	B C20	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-29	0.015	J C26	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-30	0.038	C18 q	0.025	0.00042	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-31	0.064	B	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-32	0.017	B	0.012	0.00033	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-33	0.039	C21	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-34	ND		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-35	0.0028	J q	0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-36	ND		0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-37	0.028		0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-38	ND		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-39	ND		0.012	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-40	0.052	C	0.037	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-41	0.052	C40	0.037	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-42	0.027		0.012	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-43	0.0065	J C	0.025	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-44	0.13	C B	0.037	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-45	0.019	J C	0.025	0.0021	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-46	0.0039	J	0.012	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-47	0.13	B C44	0.037	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-48	0.019		0.012	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-49	0.081	C	0.025	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1

Lab Sample ID: 580-78278-1

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.017	J C	0.025	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-51	0.019	J C45	0.025	0.0021	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-52	0.15		0.012	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-53	0.017	J C50	0.025	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-54	0.0034	J	0.012	0.00018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-55	0.0029	J	0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-56	0.046		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-57	ND		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-58	ND		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-59	0.0078	J C q	0.037	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-60	0.020		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-61	0.20	C B	0.050	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-62	0.0078	J C59 q	0.037	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-63	0.0039	J	0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-64	0.043		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-65	0.13	B C44	0.037	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-66	0.11	B	0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-67	0.0037	J	0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-68	0.0024	J	0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-69	0.081	C49	0.025	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-70	0.20	C61 B	0.050	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-71	0.052	C40	0.037	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-72	0.0027	J	0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-73	0.0065	J C43	0.025	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-74	0.20	C61 B	0.050	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-75	0.0078	J C59 q	0.037	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-76	0.20	C61 B	0.050	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-77	0.015		0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-78	ND		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-79	0.0021	J q	0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-80	ND		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-81	ND		0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-82	0.031		0.012	0.00079	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-83	0.16	C B	0.025	0.00072	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-84	0.056	B	0.012	0.00080	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-85	0.048	C	0.037	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-86	0.15	C B	0.075	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-87	0.15	B C86	0.075	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-88	0.039	C	0.025	0.00072	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-89	0.0046	J	0.012	0.00078	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-90	0.26	C B	0.037	0.00060	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-91	0.039	C88	0.025	0.00072	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-92	0.047		0.012	0.00068	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-93	0.0056	J C q	0.025	0.00069	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-94	0.0029	J	0.012	0.00078	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-95	0.19	B	0.012	0.00075	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-96	0.0021	J q	0.012	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-97	0.15	B C86	0.075	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-98	0.0091	J C	0.025	0.00067	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1

Lab Sample ID: 580-78278-1

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.16	C83 B	0.025	0.00072	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-100	0.0056	J C93 q	0.025	0.00069	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-101	0.26	B C90	0.037	0.00060	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-102	0.0091	J C98	0.025	0.00067	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-103	0.0046	J q	0.012	0.00069	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-104	ND		0.012	0.00052	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-105	0.079	B	0.012	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-106	ND		0.012	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-107	0.019	q	0.012	0.0028	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-108	0.0092	J C	0.025	0.0027	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-109	0.15	B C86	0.075	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-110	0.28	C B	0.025	0.00050	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-111	ND		0.012	0.00048	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-112	ND		0.012	0.00051	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-113	0.26	B C90	0.037	0.00060	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-114	0.0040	J	0.012	0.0024	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-115	0.28	B C110	0.025	0.00050	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-116	0.048	C85	0.037	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-117	0.048	C85	0.037	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-118	0.22	B	0.012	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-119	0.15	B C86	0.075	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-120	0.0013	J q	0.012	0.00049	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-121	ND		0.012	0.00050	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-122	0.0033	J q	0.012	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-123	0.0044	J q	0.012	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-124	0.0092	J C108	0.025	0.0027	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-125	0.15	B C86	0.075	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-126	ND		0.012	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-127	ND		0.012	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-128	0.059	C	0.025	0.0036	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-129	0.42	C B	0.050	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-130	0.025		0.012	0.0050	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-131	ND		0.012	0.0052	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-132	0.12		0.012	0.0048	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-133	0.0075	J q	0.012	0.0047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-134	0.021	J C	0.025	0.0049	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-135	0.11	C	0.025	0.00071	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-136	0.037	B q	0.012	0.00051	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-137	0.015		0.012	0.0042	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-138	0.42	B C129	0.050	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-139	0.0058	J C q	0.025	0.0042	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-140	0.0058	J C139 q	0.025	0.0042	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-141	0.066	B	0.012	0.0044	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-142	ND		0.012	0.0047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-143	0.021	J C134	0.025	0.0049	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-144	0.012		0.012	0.00065	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-145	ND		0.012	0.00049	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-146	0.066		0.012	0.0041	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-147	0.33	C B	0.025	0.0047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1

Lab Sample ID: 580-78278-1

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.012	0.00069	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-149	0.33	B C147	0.025	0.0047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-150	ND		0.012	0.00047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-151	0.11	C135	0.025	0.00071	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-152	ND		0.012	0.00050	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-153	0.34	C B	0.025	0.0033	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-154	0.0059	J q	0.012	0.00056	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-155	ND		0.012	0.00047	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-156	0.042	C B	0.025	0.0043	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-157	0.042	C156 B	0.025	0.0043	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-158	0.029	q	0.012	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-159	ND		0.012	0.0031	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-160	0.42	B C129	0.050	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-161	ND		0.012	0.0031	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-162	ND		0.012	0.0031	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-163	0.42	B C129	0.050	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-164	0.023	q	0.012	0.0033	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-165	ND		0.012	0.0035	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-166	0.059	C128	0.025	0.0036	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-167	0.014		0.012	0.0021	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-168	0.34	B C153	0.025	0.0033	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-169	ND		0.012	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-170	0.11	B	0.012	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-171	0.035	C	0.025	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-172	0.020		0.012	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-173	0.035	C171	0.025	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-174	0.11		0.012	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-175	0.0044	J	0.012	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-176	0.014		0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-177	0.065		0.012	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-178	0.025	q	0.012	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-179	0.049		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-180	0.23	C B	0.025	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-181	ND		0.012	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-182	ND		0.012	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-183	0.068	C	0.025	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-184	ND		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-185	0.068	C183	0.025	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-186	ND		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-187	0.16		0.012	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-188	ND		0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-189	ND		0.012	0.0029	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-190	0.020		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-191	ND		0.012	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-192	ND		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-193	0.23	C180 B	0.025	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-194	0.061		0.012	0.0046	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-195	0.023	q	0.012	0.0051	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-196	0.026	B	0.012	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1

Lab Sample ID: 580-78278-1

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-198	0.069	C B	0.025	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-199	0.069	C198 B	0.025	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-200	0.0074	J q	0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-201	0.0081	J	0.012	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-202	0.014		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-203	0.038	q	0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-204	ND		0.012	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-205	ND		0.012	0.0039	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-206	0.045		0.012	0.0036	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-207	ND		0.012	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-208	0.014		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
PCB-209	0.059		0.012	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 09:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	58		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-3L	59		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-4L	75		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-15L	81		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-19L	77	q	30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-37L	87		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-54L	62		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-77L	84		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-81L	85		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-104L	78		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-105L	88		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-114L	87		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-118L	84		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-123L	84		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-126L	85		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-155L	87		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-156L	78	C	30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-157L	78	C156	30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-167L	87		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-169L	88		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-170L	80		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-188L	86		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-189L	80		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-202L	102		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-205L	71		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-206L	82		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-208L	79		30 - 140				06/27/18 11:40	07/13/18 09:11	1
PCB-209L	86		30 - 140				06/27/18 11:40	07/13/18 09:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	95		40 - 125				06/27/18 11:40	07/13/18 09:11	1
PCB-111L	90		40 - 125				06/27/18 11:40	07/13/18 09:11	1
PCB-178L	97		40 - 125				06/27/18 11:40	07/13/18 09:11	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1-D

Date Collected: 06/20/18 14:22

Date Received: 06/22/18 13:20

Lab Sample ID: 580-78278-2

Matrix: Solid

Percent Solids: 39.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.013	0.00043	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-2	0.0057	J	0.013	0.00050	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-3	0.0024	J	0.013	0.00057	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-4	0.011	J q	0.025	0.0029	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-5	ND		0.013	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-6	0.0045	J q	0.013	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-7	ND		0.013	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-8	0.017	J q	0.025	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-9	ND		0.013	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-10	ND		0.013	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-11	0.053	B	0.025	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-12	0.0037	J C q	0.025	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-13	0.0037	J C12 q	0.025	0.0020	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-14	ND		0.013	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-15	0.018		0.013	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-16	0.018		0.013	0.00042	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-17	0.020	q	0.013	0.00037	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-18	0.037	C	0.025	0.00033	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-19	0.0099	J q	0.013	0.00046	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-20	0.082	C B	0.025	0.00098	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-21	0.036	C	0.025	0.00095	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-22	0.024		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-23	ND		0.013	0.00099	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-24	0.00046	J q	0.013	0.00031	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-25	0.0074	J	0.013	0.00090	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-26	0.012	J C q	0.025	0.00096	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-27	0.0045	J	0.013	0.00027	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-28	0.082	B C20	0.025	0.00098	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-29	0.012	J C26 q	0.025	0.00096	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-30	0.037	C18	0.025	0.00033	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-31	0.063	B	0.025	0.00095	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-32	0.014	B	0.013	0.00026	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-33	0.036	C21	0.025	0.00095	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-34	ND		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-35	ND		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-36	ND		0.013	0.00096	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-37	0.031		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-38	ND		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-39	ND		0.013	0.00093	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-40	0.049	C	0.038	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-41	0.049	C40	0.038	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-42	0.026		0.013	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-43	0.0037	J C q	0.025	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-44	0.12	C B	0.038	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-45	0.020	J C	0.025	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-46	0.0058	J q	0.013	0.0021	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-47	0.12	B C44	0.038	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-48	0.012	J q	0.013	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-49	0.074	C	0.025	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1-D

Lab Sample ID: 580-78278-2

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.017	J C	0.025	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-51	0.020	J C45	0.025	0.0018	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-52	0.17		0.013	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-53	0.017	J C50	0.025	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-54	0.0027	J q	0.013	0.000048	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-55	0.0020	J q	0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-56	0.045		0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-57	ND		0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-58	ND		0.013	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-59	0.0065	J C	0.038	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-60	0.022		0.013	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-61	0.20	C B	0.050	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-62	0.0065	J C59	0.038	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-63	0.0036	J q	0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-64	0.040		0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-65	0.12	B C44	0.038	0.0015	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-66	0.12	B	0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-67	0.0031	J	0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-68	0.0031	J	0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-69	0.074	C49	0.025	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-70	0.20	C61 B	0.050	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-71	0.049	C40	0.038	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-72	0.0017	J	0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-73	0.0037	J C43 q	0.025	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-74	0.20	C61 B	0.050	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-75	0.0065	J C59	0.038	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-76	0.20	C61 B	0.050	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-77	0.014		0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-78	ND		0.013	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-79	0.0028	J	0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-80	ND		0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-81	ND		0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-82	0.031		0.013	0.00060	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-83	0.17	C B	0.025	0.00055	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-84	0.062	B	0.013	0.00061	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-85	0.044	C q	0.038	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-86	0.16	C B	0.075	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-87	0.16	B C86	0.075	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-88	0.038	C q	0.025	0.00055	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-89	0.0031	J	0.013	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-90	0.27	C B	0.038	0.00046	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-91	0.038	C88 q	0.025	0.00055	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-92	0.051		0.013	0.00052	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-93	0.0061	J C	0.025	0.00052	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-94	ND		0.013	0.00059	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-95	0.23	B	0.013	0.00057	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-96	0.0022	J	0.013	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-97	0.16	B C86	0.075	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-98	0.0093	J C	0.025	0.00051	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1-D

Lab Sample ID: 580-78278-2

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.17	C83 B	0.025	0.00055	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-100	0.0061	J C93	0.025	0.00052	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-101	0.27	B C90	0.038	0.00046	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-102	0.0093	J C98	0.025	0.00051	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-103	0.0038	J q	0.013	0.00052	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-104	ND		0.013	0.00040	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-105	0.084	B	0.013	0.0021	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-106	ND		0.013	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-107	0.019	q	0.013	0.0024	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-108	0.011	J C	0.025	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-109	0.16	B C86	0.075	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-110	0.31	C B	0.025	0.00038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-111	ND		0.013	0.00037	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-112	0.0028	J	0.013	0.00039	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-113	0.27	B C90	0.038	0.00046	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-114	0.0041	J	0.013	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-115	0.31	B C110	0.025	0.00038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-116	0.044	C85 q	0.038	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-117	0.044	C85 q	0.038	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-118	0.23	B	0.013	0.0022	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-119	0.16	B C86	0.075	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-120	0.0020	J q	0.013	0.00037	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-121	ND		0.013	0.00038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-122	ND		0.013	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-123	0.0040	J q	0.013	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-124	0.011	J C108	0.025	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-125	0.16	B C86	0.075	0.00045	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-126	ND		0.013	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-127	ND		0.013	0.0023	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-128	0.056	C	0.025	0.0029	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-129	0.42	C B	0.050	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-130	0.025		0.013	0.0040	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-131	0.0071	J	0.013	0.0042	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-132	0.11		0.013	0.0039	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-133	0.0048	J q	0.013	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-134	0.019	J C	0.025	0.0040	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-135	0.13	C	0.025	0.00053	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-136	0.044	B	0.013	0.00038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-137	0.015		0.013	0.0034	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-138	0.42	B C129	0.050	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-139	0.0035	J C q	0.025	0.0034	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-140	0.0035	J C139 q	0.025	0.0034	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-141	0.070	B	0.013	0.0035	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-142	ND		0.013	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-143	0.019	J C134	0.025	0.0040	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-144	0.014		0.013	0.00048	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-145	ND		0.013	0.00036	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-146	0.068		0.013	0.0033	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-147	0.35	C B	0.025	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1-D

Lab Sample ID: 580-78278-2

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.013	0.00051	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-149	0.35	B C147	0.025	0.0038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-150	ND		0.013	0.00035	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-151	0.13	C135	0.025	0.00053	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-152	ND		0.013	0.00038	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-153	0.35	C B	0.025	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-154	0.0077	J	0.013	0.00041	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-155	ND		0.013	0.00035	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-156	0.041	C B	0.025	0.0034	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-157	0.041	C156 B	0.025	0.0034	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-158	0.037		0.013	0.0024	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-159	ND		0.013	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-160	0.42	B C129	0.050	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-161	ND		0.013	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-162	ND		0.013	0.0025	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-163	0.42	B C129	0.050	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-164	0.028		0.013	0.0027	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-165	ND		0.013	0.0029	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-166	0.056	C128	0.025	0.0029	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-167	0.013	q	0.013	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-168	0.35	B C153	0.025	0.0026	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-169	ND		0.013	0.0021	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-170	0.12	B	0.013	0.0016	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-171	0.033	C q	0.025	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-172	0.018	q	0.013	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-173	0.033	C171 q	0.025	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-174	0.11		0.013	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-175	0.0047	J	0.013	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-176	0.014		0.013	0.00096	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-177	0.069		0.013	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-178	0.027		0.013	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-179	0.048		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-180	0.26	C B	0.025	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-181	ND		0.013	0.0013	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-182	ND		0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-183	0.071	C q	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-184	ND		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-185	0.071	C183 q	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-186	ND		0.013	0.0010	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-187	0.15		0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-188	ND		0.013	0.00086	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-189	ND		0.013	0.0024	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-190	0.023		0.013	0.00092	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-191	0.0058	J	0.013	0.00096	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-192	ND		0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-193	0.26	C180 B	0.025	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-194	0.061		0.013	0.0035	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-195	0.025		0.013	0.0039	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-196	0.028	B	0.013	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1-D

Lab Sample ID: 580-78278-2

Date Collected: 06/20/18 14:22

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 39.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0035	J q	0.013	0.00089	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-198	0.079	C B	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-199	0.079	C198 B	0.025	0.0012	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-200	0.0076	J q	0.013	0.00079	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-201	0.0065	J q	0.013	0.00081	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-202	0.016		0.013	0.00091	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-203	0.041	q	0.013	0.0011	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-204	ND		0.013	0.00089	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-205	ND		0.013	0.0030	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-206	0.048		0.013	0.0036	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-207	ND		0.013	0.0019	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-208	0.013		0.013	0.0017	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
PCB-209	0.065		0.013	0.0014	ng/g	☼	06/27/18 11:40	07/13/18 10:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	54		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-3L	59		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-4L	73		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-15L	79		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-19L	85		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-37L	88		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-54L	61		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-77L	87		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-81L	86		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-104L	81		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-105L	88		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-114L	87		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-118L	85		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-123L	84		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-126L	87		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-155L	90		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-156L	82	C	30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-157L	82	C156	30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-167L	89		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-169L	94		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-170L	84		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-188L	88		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-189L	76		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-202L	103		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-205L	71		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-206L	83		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-208L	74		30 - 140				06/27/18 11:40	07/13/18 10:12	1
PCB-209L	89		30 - 140				06/27/18 11:40	07/13/18 10:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	93		40 - 125				06/27/18 11:40	07/13/18 10:12	1
PCB-111L	97		40 - 125				06/27/18 11:40	07/13/18 10:12	1
PCB-178L	97		40 - 125				06/27/18 11:40	07/13/18 10:12	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B155-BL1

Date Collected: 06/20/18 11:56

Date Received: 06/22/18 13:20

Lab Sample ID: 580-78278-3

Matrix: Solid

Percent Solids: 53.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.030	J	0.046	0.00098	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-2	0.018	J	0.046	0.0011	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-3	0.021	J q	0.046	0.0011	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-4	0.12		0.091	0.0071	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-5	ND		0.046	0.0057	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-6	0.047	q	0.046	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-7	0.012	J q	0.046	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-8	0.18		0.091	0.0046	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-9	0.013	J q	0.046	0.0053	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-10	0.010	J q	0.046	0.0056	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-11	0.090	J B	0.091	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-12	0.023	J q C	0.091	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-13	0.023	J q C12	0.091	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-14	ND		0.046	0.0043	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-15	0.15		0.046	0.0053	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-16	0.21		0.046	0.0012	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-17	0.27		0.046	0.0011	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-18	0.54	C	0.091	0.00095	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-19	0.085	q	0.046	0.0013	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-20	0.89	C B	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-21	0.38	C	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-22	0.23		0.046	0.0028	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-23	ND		0.046	0.0028	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-24	0.0094	J q	0.046	0.00091	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-25	0.068		0.046	0.0025	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-26	0.14	C	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-27	0.045	J	0.046	0.00079	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-28	0.89	C20 B	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-29	0.14	C26	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-30	0.54	C18	0.091	0.00095	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-31	0.71	B	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-32	0.19	B	0.046	0.00075	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-33	0.38	C21	0.091	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-34	0.0076	J	0.046	0.0029	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-35	0.023	J	0.046	0.0028	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-36	ND		0.046	0.0027	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-37	0.26		0.046	0.0028	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-38	ND		0.046	0.0029	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-39	0.011	J	0.046	0.0026	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-40	0.69	C	0.14	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-41	0.69	C40	0.14	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-42	0.41		0.046	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-43	0.044	J q C	0.091	0.0067	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-44	2.7	C B	0.14	0.0064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-45	0.25	C	0.091	0.0075	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-46	0.075		0.046	0.0091	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-47	2.7	C44 B	0.14	0.0064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-48	0.22		0.046	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-49	1.9	C	0.091	0.0059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B155-BL1

Lab Sample ID: 580-78278-3

Date Collected: 06/20/18 11:56

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 53.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.25	C	0.091	0.0070	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-51	0.25	C45	0.091	0.0075	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-52	5.7		0.046	0.0071	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-53	0.25	C50	0.091	0.0070	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-54	0.0090	J q	0.046	0.00023	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-55	0.016	J	0.046	0.0052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-56	0.64		0.046	0.0052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-57	ND		0.046	0.0053	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-58	0.020	J	0.046	0.0054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-59	0.13	J C	0.14	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-60	0.21		0.046	0.0053	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-61	5.4	C B	0.18	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-62	0.13	J C59	0.14	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-63	0.089		0.046	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-64	0.73		0.046	0.0048	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-65	2.7	C44 B	0.14	0.0064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-66	2.1	B	0.046	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-67	0.031	J	0.046	0.0046	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-68	0.039	J	0.046	0.0047	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-69	1.9	C49	0.091	0.0059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-70	5.4	C61 B	0.18	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-71	0.69	C40	0.14	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-72	0.066	q	0.046	0.0052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-73	0.044	J q C43	0.091	0.0067	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-74	5.4	C61 B	0.18	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-75	0.13	J C59	0.14	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-76	5.4	C61 B	0.18	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-77	0.36		0.046	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-78	ND		0.046	0.0054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-79	0.093		0.046	0.0047	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-80	ND		0.046	0.0046	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-81	ND		0.046	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-82	0.87		0.046	0.00085	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-83	6.5	C B	0.091	0.00078	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-84	2.3	B	0.046	0.00086	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-85	1.4	C	0.14	0.00063	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-86	6.1	C B	0.27	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-87	6.1	C86 B	0.27	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-88	1.4	C	0.091	0.00077	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-89	ND		0.046	0.00084	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-90	11	C B	0.14	0.00065	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-91	1.4	C88	0.091	0.00077	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-92	1.9		0.046	0.00073	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-93	0.19	C	0.091	0.00074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-94	ND		0.046	0.00084	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-95	8.1	B	0.046	0.00081	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-96	ND		0.046	0.00063	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-97	6.1	C86 B	0.27	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-98	0.23	C	0.091	0.00072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B155-BL1

Lab Sample ID: 580-78278-3

Date Collected: 06/20/18 11:56

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 53.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	6.5	C83 B	0.091	0.00078	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-100	0.19	C93	0.091	0.00074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-101	11	C90 B	0.14	0.00065	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-102	0.23	C98	0.091	0.00072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-103	0.15		0.046	0.00074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-104	ND		0.046	0.00056	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-105	2.5	B	0.046	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-106	ND		0.046	0.0048	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-107	0.84		0.046	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-108	0.32	C	0.091	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-109	6.1	C86 B	0.27	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-110	10	C B	0.091	0.00054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-111	ND		0.046	0.00052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-112	ND		0.046	0.00055	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-113	11	C90 B	0.14	0.00065	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-114	0.11		0.046	0.0047	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-115	10	C110 B	0.091	0.00054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-116	1.4	C85	0.14	0.00063	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-117	1.4	C85	0.14	0.00063	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-118	9.0	B	0.046	0.0044	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-119	6.1	C86 B	0.27	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-120	0.071		0.046	0.00053	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-121	ND		0.046	0.00054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-122	0.095		0.046	0.0055	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-123	0.11		0.046	0.0045	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-124	0.32	C108	0.091	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-125	6.1	C86 B	0.27	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-126	0.049		0.046	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-127	ND		0.046	0.0048	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-128	1.3	C	0.091	0.0057	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-129	8.6	C B	0.18	0.0059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-130	0.64		0.046	0.0078	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-131	0.11	q	0.046	0.0081	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-132	3.0		0.046	0.0076	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-133	0.17		0.046	0.0074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-134	0.50	C	0.091	0.0077	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-135	2.5	C	0.091	0.00083	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-136	1.0	B	0.046	0.00059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-137	0.36		0.046	0.0066	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-138	8.6	C129 B	0.18	0.0059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-139	0.19	C	0.091	0.0066	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-140	0.19	C139	0.091	0.0066	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-141	1.2	B	0.046	0.0069	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-142	ND		0.046	0.0073	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-143	0.50	C134	0.091	0.0077	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-144	0.24		0.046	0.00075	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-145	ND		0.046	0.00057	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-146	1.6		0.046	0.0065	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-147	7.4	C B	0.091	0.0074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B155-BL1

Lab Sample ID: 580-78278-3

Date Collected: 06/20/18 11:56

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 53.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.041	J	0.046	0.00080	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-149	7.4	C147 B	0.091	0.0074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-150	0.035	J	0.046	0.00054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-151	2.5	C135	0.091	0.00083	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-152	0.0066	J q	0.046	0.00058	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-153	7.1	C B	0.091	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-154	0.20		0.046	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-155	ND		0.046	0.00054	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-156	0.90	C B	0.091	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-157	0.90	C156 B	0.091	0.0072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-158	0.80		0.046	0.0046	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-159	ND		0.046	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-160	8.6	C129 B	0.18	0.0059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-161	ND		0.046	0.0049	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-162	ND		0.046	0.0048	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-163	8.6	C129 B	0.18	0.0059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-164	0.58		0.046	0.0052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-165	ND		0.046	0.0055	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-166	1.3	C128	0.091	0.0057	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-167	0.35		0.046	0.0037	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-168	7.1	C153 B	0.091	0.0051	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-169	ND		0.046	0.0033	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-170	1.3	B	0.046	0.00081	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-171	0.41	C	0.091	0.00081	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-172	0.21		0.046	0.00080	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-173	0.41	C171	0.091	0.00081	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-174	1.2		0.046	0.00075	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-175	0.047		0.046	0.00073	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-176	0.17		0.046	0.00055	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-177	0.81		0.046	0.00077	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-178	0.29		0.046	0.00079	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-179	0.62		0.046	0.00058	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-180	2.6	C B	0.091	0.00061	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-181	ND		0.046	0.00072	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-182	ND		0.046	0.00070	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-183	0.86	C	0.091	0.00071	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-184	ND		0.046	0.00059	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-185	0.86	C183	0.091	0.00071	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-186	ND		0.046	0.00058	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-187	1.6		0.046	0.00067	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-188	ND		0.046	0.00052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-189	0.044	J	0.046	0.0036	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-190	0.22		0.046	0.00052	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-191	0.059		0.046	0.00055	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-192	ND		0.046	0.00061	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-193	2.6	C180 B	0.091	0.00061	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-194	0.53		0.046	0.0033	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-195	0.20		0.046	0.0036	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-196	0.29	B	0.046	0.00082	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B155-BL1

Lab Sample ID: 580-78278-3

Date Collected: 06/20/18 11:56

Matrix: Solid

Date Received: 06/22/18 13:20

Percent Solids: 53.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.024	J	0.046	0.00062	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-198	0.75	C B	0.091	0.00083	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-199	0.75	C198 B	0.091	0.00083	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-200	0.058		0.046	0.00056	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-201	0.072		0.046	0.00057	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-202	0.17		0.046	0.00064	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-203	0.37		0.046	0.00074	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-204	ND		0.046	0.00063	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-205	0.028	J	0.046	0.0028	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-206	1.8		0.046	0.0050	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-207	0.098		0.046	0.0036	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-208	0.75		0.046	0.0036	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5
PCB-209	2.1		0.046	0.0022	ng/g	☼	06/27/18 11:40	07/16/18 18:43	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	74		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-3L	77		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-4L	72		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-15L	76		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-19L	101		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-37L	86		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-54L	75		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-77L	85		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-81L	85		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-104L	81		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-105L	83		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-114L	86		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-118L	83		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-123L	87		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-126L	81		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-155L	80		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-156L	80	C	30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-157L	80	C156	30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-167L	88		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-169L	91		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-170L	84		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-188L	85		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-189L	81		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-202L	87		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-205L	71		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-206L	77		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-208L	75		30 - 140	06/27/18 11:40	07/16/18 18:43	5
PCB-209L	69		30 - 140	06/27/18 11:40	07/16/18 18:43	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	93		40 - 125	06/27/18 11:40	07/16/18 18:43	5
PCB-111L	91		40 - 125	06/27/18 11:40	07/16/18 18:43	5
PCB-178L	95		40 - 125	06/27/18 11:40	07/16/18 18:43	5

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-RB-VV-20181621

Lab Sample ID: 580-78278-4

Date Collected: 06/21/18 16:45

Matrix: Water

Date Received: 06/22/18 13:20

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.040	0.00024	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-2	0.0028	J q B	0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-3	0.0084	J B	0.040	0.00028	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-4	0.0053	J q	0.060	0.0046	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-5	ND		0.040	0.0035	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-6	ND		0.040	0.0031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-7	ND		0.040	0.0032	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-8	0.0047	J q B	0.060	0.0029	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-9	ND		0.040	0.0033	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-10	ND		0.040	0.0035	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-11	0.032	J B	0.060	0.0030	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-12	ND	C	0.080	0.0031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-13	ND	C12	0.080	0.0031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-14	ND		0.040	0.0027	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-15	0.0037	J q	0.040	0.0032	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-16	0.0033	J	0.040	0.00019	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-17	0.0028	J q B	0.040	0.00017	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-18	0.0060	J q C B	0.080	0.00015	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-19	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-20	0.0087	J C B	0.080	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-21	0.0040	J C B	0.080	0.00020	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-22	0.0019	J q B	0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-23	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-24	ND		0.040	0.00015	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-25	ND		0.040	0.00019	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-26	0.0011	J C	0.080	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-27	ND		0.040	0.00013	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-28	0.0087	J C20 B	0.080	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-29	0.0011	J C26	0.080	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-30	0.0060	J q C18 B	0.080	0.00015	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-31	0.0063	J B	0.040	0.00020	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-32	0.0028	J	0.040	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-33	0.0040	J C21 B	0.080	0.00020	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-34	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-35	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-36	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-37	0.0026	J B	0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-38	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-39	ND		0.040	0.00020	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-40	0.0032	J C	0.12	0.00076	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-41	0.0032	J C40	0.12	0.00076	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-42	ND		0.040	0.00076	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-43	ND	C	0.080	0.00071	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-44	0.13	C B	0.12	0.00067	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-45	0.011	J C	0.080	0.00080	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-46	ND		0.040	0.00097	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-47	0.13	C44 B	0.12	0.00067	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-48	ND		0.040	0.00076	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-49	0.0034	J q C B	0.080	0.00062	ng/L		07/02/18 12:15	07/09/18 06:35	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-RB-VV-20181621

Lab Sample ID: 580-78278-4

Date Collected: 06/21/18 16:45

Matrix: Water

Date Received: 06/22/18 13:20

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	ND	C	0.080	0.00074	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-51	0.011	J C45	0.080	0.00080	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-52	0.0080	J B	0.040	0.00075	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-53	ND	C50	0.080	0.00074	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-54	ND		0.040	0.000023	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-55	ND		0.040	0.00055	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-56	0.00090	J q	0.040	0.00055	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-57	ND		0.040	0.00056	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-58	ND		0.040	0.00057	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-59	ND	C	0.12	0.00054	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-60	0.0013	J q	0.040	0.00056	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-61	0.0085	J C B	0.16	0.00053	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-62	ND	C59	0.12	0.00054	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-63	ND		0.040	0.00051	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-64	0.0017	J q	0.040	0.00051	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-65	0.13	C44 B	0.12	0.00067	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-66	0.0030	J B	0.040	0.00053	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-67	ND		0.040	0.00049	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-68	0.025	J	0.040	0.00050	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-69	0.0034	J q C49 B	0.080	0.00062	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-70	0.0085	J C61 B	0.16	0.00053	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-71	0.0032	J C40	0.12	0.00076	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-72	ND		0.040	0.00055	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-73	ND	C43	0.080	0.00071	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-74	0.0085	J C61 B	0.16	0.00053	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-75	ND	C59	0.12	0.00054	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-76	0.0085	J C61 B	0.16	0.00053	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-77	ND		0.040	0.00054	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-78	ND		0.040	0.00057	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-79	ND		0.040	0.00049	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-80	ND		0.040	0.00048	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-81	ND		0.040	0.00052	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-82	ND		0.040	0.000092	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-83	0.0016	J q C B	0.080	0.000084	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-84	0.00084	J q	0.040	0.000093	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-85	0.0014	J q C B	0.12	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-86	0.0065	J C B	0.24	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-87	0.0065	J C86 B	0.24	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-88	ND	C	0.080	0.000083	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-89	ND		0.040	0.000090	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-90	0.0065	J C B	0.12	0.000069	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-91	ND	C88	0.080	0.000083	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-92	0.00065	J q B	0.040	0.000078	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-93	ND	C	0.080	0.000079	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-94	ND		0.040	0.000090	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-95	0.0059	J B	0.040	0.000087	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-96	ND		0.040	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-97	0.0065	J C86 B	0.24	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-98	ND	C	0.080	0.000077	ng/L		07/02/18 12:15	07/09/18 06:35	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-RB-VV-20181621

Lab Sample ID: 580-78278-4

Date Collected: 06/21/18 16:45

Matrix: Water

Date Received: 06/22/18 13:20

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.0016	J q C83 B	0.080	0.000084	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-100	ND	C93	0.080	0.000079	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-101	0.0065	J C90 B	0.12	0.000069	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-102	ND	C98	0.080	0.000077	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-103	ND		0.040	0.000079	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-104	ND		0.040	0.000060	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-105	0.0031	J q B	0.040	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-106	ND		0.040	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-107	0.00075	J q B	0.040	0.00013	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-108	ND	C	0.080	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-109	0.0065	J C86 B	0.24	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-110	0.0066	J q C B	0.080	0.000058	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-111	ND		0.040	0.000056	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-112	ND		0.040	0.000059	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-113	0.0065	J C90 B	0.12	0.000069	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-114	ND		0.040	0.00011	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-115	0.0066	J q C110 E	0.080	0.000058	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-116	0.0014	J q C85 B	0.12	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-117	0.0014	J q C85 B	0.12	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-118	0.0043	J q B	0.040	0.00011	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-119	0.0065	J C86 B	0.24	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-120	ND		0.040	0.000057	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-121	ND		0.040	0.000058	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-122	ND		0.040	0.00014	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-123	ND		0.040	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-124	ND	C108	0.080	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-125	0.0065	J C86 B	0.24	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-126	ND		0.040	0.00013	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-127	ND		0.040	0.00012	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-128	ND	C	0.080	0.00031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-129	0.0070	J q C B	0.16	0.00032	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-130	ND		0.040	0.00042	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-131	ND		0.040	0.00044	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-132	0.0030	J B	0.040	0.00041	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-133	ND		0.040	0.00040	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-134	ND	C	0.080	0.00041	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-135	ND	C	0.080	0.000023	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-136	0.00070	J q B	0.040	0.000016	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-137	ND		0.040	0.00036	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-138	0.0070	J q C129 E	0.16	0.00032	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-139	ND	C	0.080	0.00035	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-140	ND	C139	0.080	0.00035	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-141	0.0010	J q B	0.040	0.00037	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-142	ND		0.040	0.00039	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-143	ND	C134	0.080	0.00041	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-144	ND		0.040	0.000021	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-145	ND		0.040	0.000016	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-146	0.0017	J B	0.040	0.00035	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-147	0.0062	J C B	0.080	0.00040	ng/L		07/02/18 12:15	07/09/18 06:35	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-RB-VV-20181621

Lab Sample ID: 580-78278-4

Date Collected: 06/21/18 16:45

Matrix: Water

Date Received: 06/22/18 13:20

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.040	0.000022	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-149	0.0062	J C147 B	0.080	0.00040	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-150	ND		0.040	0.000015	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-151	ND	C135	0.080	0.000023	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-152	ND		0.040	0.000016	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-153	0.0088	J C B	0.080	0.00028	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-154	ND		0.040	0.000018	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-155	ND		0.040	0.000015	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-156	ND	C	0.080	0.00036	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-157	ND	C156	0.080	0.00036	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-158	0.0014	J B	0.040	0.00025	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-159	ND		0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-160	0.0070	J q C129 E	0.16	0.00032	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-161	ND		0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-162	ND		0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-163	0.0070	J q C129 E	0.16	0.00032	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-164	ND		0.040	0.00028	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-165	ND		0.040	0.00030	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-166	ND	C128	0.080	0.00031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-167	ND		0.040	0.00019	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-168	0.0088	J C153 B	0.080	0.00028	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-169	ND		0.040	0.00019	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-170	0.0013	J q B	0.040	0.000071	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-171	ND	C	0.080	0.000073	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-172	ND		0.040	0.000072	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-173	ND	C171	0.080	0.000073	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-174	0.0025	J q B	0.040	0.000068	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-175	ND		0.040	0.000066	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-176	ND		0.040	0.000050	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-177	ND		0.040	0.000070	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-178	0.0011	J	0.040	0.000071	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-179	0.00071	J q B	0.040	0.000052	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-180	0.0073	J C B	0.080	0.000055	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-181	ND		0.040	0.000065	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-182	ND		0.040	0.000063	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-183	0.0023	J q C B	0.080	0.000064	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-184	ND		0.040	0.000054	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-185	0.0023	J q C183 E	0.080	0.000064	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-186	ND		0.040	0.000052	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-187	0.0015	J q B	0.040	0.000061	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-188	ND		0.040	0.000048	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-189	ND		0.040	0.00013	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-190	ND		0.040	0.000047	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-191	ND		0.040	0.000049	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-192	ND		0.040	0.000055	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-193	0.0073	J C180 B	0.080	0.000055	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-194	ND		0.040	0.00031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-195	ND		0.040	0.00034	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-196	ND		0.040	0.000040	ng/L		07/02/18 12:15	07/09/18 06:35	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-RB-VV-20181621

Lab Sample ID: 580-78278-4

Date Collected: 06/21/18 16:45

Matrix: Water

Date Received: 06/22/18 13:20

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.040	0.000030	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-198	0.0016	J q C B	0.080	0.000040	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-199	0.0016	J q C198 E	0.080	0.000040	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-200	ND		0.040	0.000027	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-201	ND		0.040	0.000028	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-202	ND		0.040	0.000031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-203	ND		0.040	0.000036	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-204	ND		0.040	0.000031	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-205	ND		0.040	0.00027	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-206	ND		0.040	0.0013	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-207	ND		0.040	0.00090	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-208	ND		0.040	0.00090	ng/L		07/02/18 12:15	07/09/18 06:35	1
PCB-209	0.0011	J q B	0.040	0.000070	ng/L		07/02/18 12:15	07/09/18 06:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	60		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-3L	61		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-4L	80		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-15L	85		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-19L	86		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-37L	93		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-54L	89		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-77L	87		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-81L	87		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-104L	72		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-105L	92		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-114L	93		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-118L	90		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-123L	88		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-126L	87		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-155L	87		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-156L	88	C	30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-157L	88	C156	30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-167L	90		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-169L	92		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-170L	83		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-188L	81		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-189L	80		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-202L	104		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-205L	75		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-206L	87		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-208L	90		30 - 140				07/02/18 12:15	07/09/18 06:35	1
PCB-209L	95		30 - 140				07/02/18 12:15	07/09/18 06:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	105		40 - 125				07/02/18 12:15	07/09/18 06:35	1
PCB-111L	106		40 - 125				07/02/18 12:15	07/09/18 06:35	1
PCB-178L	110		40 - 125				07/02/18 12:15	07/09/18 06:35	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21553/16-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21553

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.010	0.00016	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-2	ND		0.010	0.00019	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-3	ND		0.010	0.00023	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-4	ND		0.020	0.0018	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-5	ND		0.010	0.0015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-6	ND		0.010	0.0013	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-7	ND		0.010	0.0014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-8	ND		0.020	0.0012	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-9	ND		0.010	0.0014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-10	ND		0.010	0.0015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-11	0.00298	J q	0.020	0.0013	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-12	ND	C	0.020	0.0014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-13	ND	C12	0.020	0.0014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-14	ND		0.010	0.0012	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-15	ND		0.010	0.0015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-16	ND		0.010	0.00015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-17	ND		0.010	0.00013	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-18	ND	C	0.020	0.00012	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-19	ND		0.010	0.00016	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-20	0.000918	J q C	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-21	ND	C	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-22	ND		0.010	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-23	ND		0.010	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-24	ND		0.010	0.00011	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-25	ND		0.010	0.00016	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-26	ND	C	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-27	ND		0.010	0.000097	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-28	0.000918	J q C20	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-29	ND	C26	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-30	ND	C18	0.020	0.00012	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-31	0.000429	J q	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-32	0.000562	J q	0.010	0.000093	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-33	ND	C21	0.020	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-34	ND		0.010	0.00018	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-35	ND		0.010	0.00018	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-36	ND		0.010	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-37	ND		0.010	0.00017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-38	ND		0.010	0.00018	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-39	ND		0.010	0.00016	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-40	ND	C	0.030	0.00039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-41	ND	C40	0.030	0.00039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-42	ND		0.010	0.00039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-43	ND	C	0.020	0.00037	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-44	0.00230	J C	0.030	0.00035	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-45	ND	C	0.020	0.00041	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-46	ND		0.010	0.00050	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-47	0.00230	J C44	0.030	0.00035	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-48	ND		0.010	0.00039	ng/g		06/27/18 11:40	07/11/18 04:18	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21553/16-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21553

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	ND	C	0.020	0.00032	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-50	ND	C	0.020	0.00038	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-51	ND	C45	0.020	0.00041	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-52	ND		0.010	0.00039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-53	ND	C50	0.020	0.00038	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-54	ND		0.010	0.00022	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-55	ND		0.010	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-56	ND		0.010	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-57	ND		0.010	0.00029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-58	ND		0.010	0.00029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-59	ND	C	0.030	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-60	ND		0.010	0.00029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-61	0.00149	J q C	0.040	0.00027	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-62	ND	C59	0.030	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-63	ND		0.010	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-64	ND		0.010	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-65	0.00230	J C44	0.030	0.00035	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-66	0.000648	J q	0.010	0.00027	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-67	ND		0.010	0.00025	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-68	ND		0.010	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-69	ND	C49	0.020	0.00032	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-70	0.00149	J q C61	0.040	0.00027	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-71	ND	C40	0.030	0.00039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-72	ND		0.010	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-73	ND	C43	0.020	0.00037	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-74	0.00149	J q C61	0.040	0.00027	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-75	ND	C59	0.030	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-76	0.00149	J q C61	0.040	0.00027	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-77	ND		0.010	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-78	ND		0.010	0.00029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-79	ND		0.010	0.00025	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-80	ND		0.010	0.00025	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-81	ND		0.010	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-82	ND		0.010	0.000083	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-83	0.000857	J q C	0.020	0.000075	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-84	0.000714	J	0.010	0.000084	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-85	ND	C	0.030	0.000061	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-86	0.00104	J q C	0.060	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-87	0.00104	J q C86	0.060	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-88	ND	C	0.020	0.000075	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-89	ND		0.010	0.000081	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-90	0.00154	J q C	0.030	0.000063	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-91	ND	C88	0.020	0.000075	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-92	ND		0.010	0.000071	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-93	ND	C	0.020	0.000072	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-94	ND		0.010	0.000081	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-95	0.00142	J	0.010	0.000078	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-96	ND		0.010	0.000061	ng/g		06/27/18 11:40	07/11/18 04:18	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21553/16-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21553

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	0.00104	J q C86	0.060	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-98	ND	C	0.020	0.000069	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-99	0.000857	J q C83	0.020	0.000075	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-100	ND	C93	0.020	0.000072	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-101	0.00154	J q C90	0.030	0.000063	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-102	ND	C98	0.020	0.000069	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-103	ND		0.010	0.000072	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-104	ND		0.010	0.000054	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-105	0.000477	J q	0.010	0.000014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-106	ND		0.010	0.000015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-107	ND		0.010	0.000016	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-108	ND	C	0.020	0.000015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-109	0.00104	J q C86	0.060	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-110	0.00139	J q C	0.020	0.000052	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-111	ND		0.010	0.000050	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-112	ND		0.010	0.000053	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-113	0.00154	J q C90	0.030	0.000063	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-114	ND		0.010	0.000014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-115	0.00139	J q C110	0.020	0.000052	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-116	ND	C85	0.030	0.000061	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-117	ND	C85	0.030	0.000061	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-118	0.00133	J	0.010	0.000014	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-119	0.00104	J q C86	0.060	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-120	ND		0.010	0.000051	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-121	ND		0.010	0.000053	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-122	ND		0.010	0.000017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-123	ND		0.010	0.000015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-124	ND	C108	0.020	0.000015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-125	0.00104	J q C86	0.060	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-126	ND		0.010	0.000017	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-127	ND		0.010	0.000015	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-128	ND	C	0.020	0.000029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-129	0.00196	J q C	0.040	0.000030	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-130	ND		0.010	0.000039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-131	ND		0.010	0.000041	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-132	ND		0.010	0.000038	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-133	ND		0.010	0.000037	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-134	ND	C	0.020	0.000039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-135	ND	C	0.020	0.000039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-136	0.000651	J q	0.010	0.000028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-137	ND		0.010	0.000033	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-138	0.00196	J q C129	0.040	0.000030	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-139	ND	C	0.020	0.000033	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-140	ND	C139	0.020	0.000033	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-141	0.000640	J q	0.010	0.000035	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-142	ND		0.010	0.000037	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-143	ND	C134	0.020	0.000039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-144	ND		0.010	0.000035	ng/g		06/27/18 11:40	07/11/18 04:18	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21553/16-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21553

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.010	0.000027	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-146	ND		0.010	0.00033	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-147	0.00148	J q C	0.020	0.00037	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-148	ND		0.010	0.000038	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-149	0.00148	J q C147	0.020	0.00037	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-150	ND		0.010	0.000026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-151	ND	C135	0.020	0.000039	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-152	ND		0.010	0.000028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-153	0.00103	J C	0.020	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-154	ND		0.010	0.000030	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-155	ND		0.010	0.000026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-156	0.000776	J C	0.020	0.00033	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-157	0.000776	J C156	0.020	0.00033	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-158	ND		0.010	0.00023	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-159	ND		0.010	0.00025	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-160	0.00196	J q C129	0.040	0.00030	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-161	ND		0.010	0.00025	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-162	ND		0.010	0.00024	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-163	0.00196	J q C129	0.040	0.00030	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-164	ND		0.010	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-165	ND		0.010	0.00028	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-166	ND	C128	0.020	0.00029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-167	ND		0.010	0.00018	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-168	0.00103	J C153	0.020	0.00026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-169	ND		0.010	0.00019	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-170	0.00124	J	0.010	0.000075	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-171	ND	C	0.020	0.000070	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-172	ND		0.010	0.000069	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-173	ND	C171	0.020	0.000070	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-174	ND		0.010	0.000065	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-175	ND		0.010	0.000063	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-176	ND		0.010	0.000048	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-177	ND		0.010	0.000067	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-178	ND		0.010	0.000068	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-179	ND		0.010	0.000050	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-180	0.00168	J q C	0.020	0.000053	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-181	ND		0.010	0.000063	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-182	ND		0.010	0.000061	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-183	ND	C	0.020	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-184	ND		0.010	0.000051	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-185	ND	C183	0.020	0.000062	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-186	ND		0.010	0.000050	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-187	ND		0.010	0.000058	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-188	ND		0.010	0.000043	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-189	ND		0.010	0.000031	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-190	ND		0.010	0.000045	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-191	ND		0.010	0.000047	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-192	ND		0.010	0.000053	ng/g		06/27/18 11:40	07/11/18 04:18	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21553/16-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21553

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	0.00168	J q C180	0.020	0.000053	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-194	ND		0.010	0.00012	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-195	ND		0.010	0.00013	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-196	0.000267	J q	0.010	0.000029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-197	ND		0.010	0.000022	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-198	0.000465	J q C	0.020	0.000029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-199	0.000465	J q C198	0.020	0.000029	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-200	ND		0.010	0.000020	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-201	ND		0.010	0.000020	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-202	ND		0.010	0.000023	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-203	ND		0.010	0.000026	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-204	ND		0.010	0.000022	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-205	ND		0.010	0.000099	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-206	ND		0.010	0.00063	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-207	ND		0.010	0.00046	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-208	ND		0.010	0.00047	ng/g		06/27/18 11:40	07/11/18 04:18	1
PCB-209	ND		0.010	0.00045	ng/g		06/27/18 11:40	07/11/18 04:18	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	74		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-3L	73		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-4L	76		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-15L	74		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-19L	85		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-37L	81		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-54L	60		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-77L	76		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-81L	76		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-104L	78		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-105L	87		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-114L	87		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-118L	86		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-123L	83		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-126L	82		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-155L	76		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-156L	85	C	30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-157L	85	C156	30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-167L	86		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-169L	90		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-170L	82		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-188L	87		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-189L	79		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-202L	89		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-205L	73		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-206L	84		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-208L	83		30 - 140	06/27/18 11:40	07/11/18 04:18	1
PCB-209L	85		30 - 140	06/27/18 11:40	07/11/18 04:18	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21553/16-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21553

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	89		40 - 125	06/27/18 11:40	07/11/18 04:18	1
PCB-111L	87		40 - 125	06/27/18 11:40	07/11/18 04:18	1
PCB-178L	92		40 - 125	06/27/18 11:40	07/11/18 04:18	1

Lab Sample ID: LCS 140-21553/17-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21553

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	0.500	0.420		ng/g		84	50 - 150
PCB-3	0.500	0.454		ng/g		91	50 - 150
PCB-4	0.500	0.509		ng/g		102	50 - 150
PCB-15	0.500	0.555		ng/g		111	50 - 150
PCB-19	0.500	0.639		ng/g		128	50 - 150
PCB-37	0.500	0.505		ng/g		101	50 - 150
PCB-54	0.500	0.577		ng/g		115	50 - 150
PCB-77	0.500	0.501		ng/g		100	50 - 150
PCB-81	0.500	0.479		ng/g		96	50 - 150
PCB-104	0.500	0.562		ng/g		112	50 - 150
PCB-105	0.500	0.507		ng/g		101	50 - 150
PCB-114	0.500	0.552		ng/g		110	50 - 150
PCB-118	0.500	0.543		ng/g		109	50 - 150
PCB-123	0.500	0.581		ng/g		116	50 - 150
PCB-126	0.500	0.543		ng/g		109	50 - 150
PCB-155	0.500	0.534		ng/g		107	50 - 150
PCB-156	1.00	1.09	C	ng/g		109	50 - 150
PCB-157	1.00	1.09	C156	ng/g		109	50 - 150
PCB-167	0.500	0.554		ng/g		111	50 - 150
PCB-169	0.500	0.495		ng/g		99	50 - 150
PCB-188	0.500	0.537		ng/g		107	50 - 150
PCB-189	0.500	0.541		ng/g		108	50 - 150
PCB-202	0.500	0.502		ng/g		100	50 - 150
PCB-205	0.500	0.596		ng/g		119	50 - 150
PCB-206	0.500	0.513		ng/g		103	50 - 150
PCB-208	0.500	0.525		ng/g		105	50 - 150
PCB-209	0.500	0.564		ng/g		113	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	74		30 - 140
PCB-3L	73		30 - 140
PCB-4L	76		30 - 140
PCB-15L	77		30 - 140
PCB-19L	79		30 - 140
PCB-37L	85		30 - 140
PCB-54L	56		30 - 140
PCB-77L	82		30 - 140
PCB-81L	81		30 - 140
PCB-104L	75		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: LCS 140-21553/17-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21553

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
PCB-105L	87		30 - 140
PCB-114L	87		30 - 140
PCB-118L	85		30 - 140
PCB-123L	84		30 - 140
PCB-126L	82		30 - 140
PCB-155L	76		30 - 140
PCB-156L	87	C	30 - 140
PCB-157L	87	C156	30 - 140
PCB-167L	87		30 - 140
PCB-169L	91		30 - 140
PCB-170L	80		30 - 140
PCB-188L	83		30 - 140
PCB-189L	76		30 - 140
PCB-202L	90		30 - 140
PCB-205L	72		30 - 140
PCB-206L	81		30 - 140
PCB-208L	80		30 - 140
PCB-209L	82		30 - 140

Surrogate	LCS		Limits
	%Recovery	Qualifier	
PCB-28L	94		40 - 125
PCB-111L	89		40 - 125
PCB-178L	94		40 - 125

Lab Sample ID: LCSD 140-21553/18-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21553

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	Limit	
PCB-1	0.500	0.401		ng/g		80	50 - 150	5	50	
PCB-3	0.500	0.451		ng/g		90	50 - 150	1	50	
PCB-4	0.500	0.488		ng/g		98	50 - 150	4	50	
PCB-15	0.500	0.571		ng/g		114	50 - 150	3	50	
PCB-19	0.500	0.598		ng/g		120	50 - 150	7	50	
PCB-37	0.500	0.498		ng/g		100	50 - 150	1	50	
PCB-54	0.500	0.544		ng/g		109	50 - 150	6	50	
PCB-77	0.500	0.494		ng/g		99	50 - 150	1	50	
PCB-81	0.500	0.468		ng/g		94	50 - 150	2	50	
PCB-104	0.500	0.548		ng/g		110	50 - 150	2	50	
PCB-105	0.500	0.501		ng/g		100	50 - 150	1	50	
PCB-114	0.500	0.551		ng/g		110	50 - 150	0	50	
PCB-118	0.500	0.532		ng/g		106	50 - 150	2	50	
PCB-123	0.500	0.574		ng/g		115	50 - 150	1	50	
PCB-126	0.500	0.542		ng/g		108	50 - 150	0	50	
PCB-155	0.500	0.524		ng/g		105	50 - 150	2	50	
PCB-156	1.00	1.09	C	ng/g		109	50 - 150	0	50	
PCB-157	1.00	1.09	C156	ng/g		109	50 - 150	0	50	
PCB-167	0.500	0.546		ng/g		109	50 - 150	1	50	

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: LCSD 140-21553/18-B

Matrix: Solid

Analysis Batch: 21859

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21553

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-169	0.500	0.487		ng/g		97	50 - 150	1	50
PCB-188	0.500	0.528		ng/g		106	50 - 150	2	50
PCB-189	0.500	0.508		ng/g		102	50 - 150	6	50
PCB-202	0.500	0.496		ng/g		99	50 - 150	1	50
PCB-205	0.500	0.592		ng/g		118	50 - 150	1	50
PCB-206	0.500	0.519		ng/g		104	50 - 150	1	50
PCB-208	0.500	0.530		ng/g		106	50 - 150	1	50
PCB-209	0.500	0.565		ng/g		113	50 - 150	0	50

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
PCB-1L	76		30 - 140
PCB-3L	74		30 - 140
PCB-4L	79		30 - 140
PCB-15L	75		30 - 140
PCB-19L	90		30 - 140
PCB-37L	83		30 - 140
PCB-54L	63		30 - 140
PCB-77L	82		30 - 140
PCB-81L	82		30 - 140
PCB-104L	76		30 - 140
PCB-105L	90		30 - 140
PCB-114L	90		30 - 140
PCB-118L	89		30 - 140
PCB-123L	86		30 - 140
PCB-126L	82		30 - 140
PCB-155L	75		30 - 140
PCB-156L	87	C	30 - 140
PCB-157L	87	C156	30 - 140
PCB-167L	88		30 - 140
PCB-169L	91		30 - 140
PCB-170L	83		30 - 140
PCB-188L	85		30 - 140
PCB-189L	77		30 - 140
PCB-202L	92		30 - 140
PCB-205L	72		30 - 140
PCB-206L	82		30 - 140
PCB-208L	80		30 - 140
PCB-209L	83		30 - 140

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
PCB-28L	88		40 - 125
PCB-111L	88		40 - 125
PCB-178L	93		40 - 125

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21673/7-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21673

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.00166	J	0.040	0.00034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-2	0.00270	J	0.040	0.00037	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-3	0.00625	J	0.040	0.00040	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-4	ND		0.060	0.0045	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-5	ND		0.040	0.0038	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-6	ND		0.040	0.0033	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-7	ND		0.040	0.0034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-8	0.00401	J q	0.060	0.0031	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-9	ND		0.040	0.0035	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-10	ND		0.040	0.0037	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-11	0.0252	J q	0.060	0.0033	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-12	ND	C	0.080	0.0034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-13	ND	C12	0.080	0.0034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-14	ND		0.040	0.0029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-15	ND	q	0.040	0.0036	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-16	ND		0.040	0.00029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-17	0.00203	J q	0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-18	0.00335	J q C	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-19	ND		0.040	0.00032	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-20	0.00471	J q C	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-21	0.00340	J q C	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-22	0.00193	J q	0.040	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-23	ND		0.040	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-24	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-25	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-26	ND	C	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-27	ND		0.040	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-28	0.00471	J q C20	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-29	ND	C26	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-30	0.00335	J q C18	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-31	0.00324	J q	0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-32	ND		0.040	0.00018	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-33	0.00340	J q C21	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-34	ND		0.040	0.00024	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-35	ND		0.040	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-36	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-37	0.00212	J q	0.040	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-38	ND		0.040	0.00024	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-39	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-40	ND	C	0.12	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-41	ND	C40	0.12	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-42	ND		0.040	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-43	ND	C	0.080	0.0011	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-44	0.00883	J q C	0.12	0.0011	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-45	ND	C	0.080	0.0013	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-46	ND		0.040	0.0015	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-47	0.00883	J q C44	0.12	0.0011	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-48	ND		0.040	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21673/7-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21673

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	0.00164	J q C	0.080	0.00098	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-50	ND	C	0.080	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-51	ND	C45	0.080	0.0013	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-52	0.00488	J q	0.040	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-53	ND	C50	0.080	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-54	ND		0.040	0.000016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-55	ND		0.040	0.00088	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-56	ND		0.040	0.00088	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-57	ND		0.040	0.00089	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-58	ND		0.040	0.00090	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-59	ND	C	0.12	0.00085	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-60	ND		0.040	0.00089	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-61	0.00647	J q C	0.16	0.00084	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-62	ND	C59	0.12	0.00085	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-63	ND		0.040	0.00082	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-64	ND		0.040	0.00081	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-65	0.00883	J q C44	0.12	0.0011	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-66	0.00457	J q	0.040	0.00083	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-67	ND		0.040	0.00077	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-68	ND		0.040	0.00079	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-69	0.00164	J q C49	0.080	0.00098	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-70	0.00647	J q C61	0.16	0.00084	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-71	ND	C40	0.12	0.0012	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-72	ND		0.040	0.00087	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-73	ND	C43	0.080	0.0011	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-74	0.00647	J q C61	0.16	0.00084	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-75	ND	C59	0.12	0.00085	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-76	0.00647	J q C61	0.16	0.00084	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-77	ND		0.040	0.00088	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-78	ND		0.040	0.00090	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-79	ND		0.040	0.00078	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-80	ND		0.040	0.00077	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-81	ND		0.040	0.00079	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-82	ND		0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-83	0.00636	J q C	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-84	ND		0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-85	0.00357	J q C	0.12	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-86	0.0111	J C	0.24	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-87	0.0111	J C86	0.24	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-88	0.00242	J q C	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-89	ND		0.040	0.00025	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-90	0.0138	J C	0.12	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-91	0.00242	J q C88	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-92	0.00233	J q	0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-93	0.00104	J q C	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-94	ND		0.040	0.00025	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-95	0.00785	J	0.040	0.00024	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-96	ND		0.040	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21673/7-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21673

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	0.0111	J C86	0.24	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-98	ND	C	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-99	0.00636	J q C83	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-100	0.00104	J q C93	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-101	0.0138	J C90	0.12	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-102	ND	C98	0.080	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-103	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-104	ND		0.040	0.00017	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-105	0.00563	J	0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-106	ND		0.040	0.00028	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-107	0.000354	J q	0.040	0.00030	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-108	0.00139	J q C	0.080	0.00029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-109	0.0111	J C86	0.24	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-110	0.0126	J q C	0.080	0.00016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-111	ND		0.040	0.00016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-112	ND		0.040	0.00016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-113	0.0138	J C90	0.12	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-114	0.00108	J	0.040	0.00027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-115	0.0126	J q C110	0.080	0.00016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-116	0.00357	J q C85	0.12	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-117	0.00357	J q C85	0.12	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-118	0.0114	J	0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-119	0.0111	J C86	0.24	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-120	ND		0.040	0.00016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-121	ND		0.040	0.00016	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-122	ND		0.040	0.00032	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-123	ND		0.040	0.00029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-124	0.00139	J q C108	0.080	0.00029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-125	0.0111	J C86	0.24	0.00019	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-126	ND		0.040	0.00030	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-127	ND		0.040	0.00028	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-128	0.00401	J C	0.080	0.00038	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-129	0.0287	J C	0.16	0.00039	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-130	ND		0.040	0.00051	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-131	ND		0.040	0.00054	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-132	0.00659	J	0.040	0.00050	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-133	ND		0.040	0.00049	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-134	0.00151	J q C	0.080	0.00051	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-135	0.00671	J q C	0.080	0.00059	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-136	0.00252	J q	0.040	0.00043	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-137	ND		0.040	0.00044	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-138	0.0287	J C129	0.16	0.00039	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-139	ND	C	0.080	0.00043	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-140	ND	C139	0.080	0.00043	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-141	0.00437	J	0.040	0.00045	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-142	ND		0.040	0.00048	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-143	0.00151	J q C134	0.080	0.00051	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-144	0.00122	J q	0.040	0.00054	ng/L		07/02/18 12:15	07/09/18 03:30	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21673/7-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21673

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.040	0.000041	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-146	0.00405	J q	0.040	0.00043	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-147	0.0206	J C	0.080	0.00049	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-148	ND		0.040	0.000057	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-149	0.0206	J C147	0.080	0.00049	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-150	ND		0.040	0.000039	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-151	0.00671	J q C135	0.080	0.000059	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-152	ND		0.040	0.000042	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-153	0.0184	J C	0.080	0.00034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-154	ND		0.040	0.000046	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-155	ND		0.040	0.000039	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-156	0.00406	J q C	0.080	0.00043	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-157	0.00406	J q C156	0.080	0.00043	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-158	0.00205	J q	0.040	0.00031	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-159	ND		0.040	0.00032	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-160	0.0287	J C129	0.16	0.00039	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-161	ND		0.040	0.00032	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-162	ND		0.040	0.00032	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-163	0.0287	J C129	0.16	0.00039	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-164	0.00111	J q	0.040	0.00034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-165	ND		0.040	0.00037	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-166	0.00401	J C128	0.080	0.00038	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-167	ND		0.040	0.00024	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-168	0.0184	J C153	0.080	0.00034	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-169	ND		0.040	0.00024	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-170	0.00711	J	0.040	0.00029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-171	0.00212	J q C	0.080	0.00030	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-172	0.00241	J	0.040	0.00030	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-173	0.00212	J q C171	0.080	0.00030	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-174	0.00725	J q	0.040	0.00028	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-175	ND		0.040	0.00027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-176	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-177	0.00339	J q	0.040	0.00029	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-178	ND		0.040	0.00030	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-179	0.00338	J q	0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-180	0.0168	J C	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-181	ND		0.040	0.00027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-182	ND		0.040	0.00026	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-183	0.00515	J C	0.080	0.00027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-184	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-185	0.00515	J C183	0.080	0.00027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-186	ND		0.040	0.00022	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-187	0.0101	J	0.040	0.00025	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-188	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-189	0.000414	J	0.040	0.00014	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-190	0.00155	J	0.040	0.00020	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-191	ND		0.040	0.00021	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-192	ND		0.040	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21673/7-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21673

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	0.0168	J C180	0.080	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-194	0.00368	J q	0.040	0.00023	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-195	ND		0.040	0.00025	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-196	0.00165	J q	0.040	0.000036	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-197	ND		0.040	0.000027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-198	0.00451	J q C	0.080	0.000036	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-199	0.00451	J q C198	0.080	0.000036	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-200	ND		0.040	0.000024	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-201	ND		0.040	0.000025	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-202	0.00125	J q	0.040	0.000028	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-203	0.00300	J	0.040	0.000032	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-204	ND		0.040	0.000027	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-205	0.000879	J	0.040	0.00020	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-206	ND		0.040	0.00091	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-207	ND		0.040	0.00066	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-208	ND		0.040	0.00068	ng/L		07/02/18 12:15	07/09/18 03:30	1
PCB-209	0.00334	J	0.040	0.00031	ng/L		07/02/18 12:15	07/09/18 03:30	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	59		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-3L	60		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-4L	79		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-15L	81		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-19L	85		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-37L	94		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-54L	85		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-77L	92		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-81L	91		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-104L	69		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-105L	95		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-114L	93		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-118L	94		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-123L	89		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-126L	91		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-155L	88		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-156L	94	C	30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-157L	94	C156	30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-167L	92		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-169L	99		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-170L	92		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-188L	85		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-189L	85		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-202L	110		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-205L	81		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-206L	98		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-208L	94		30 - 140	07/02/18 12:15	07/09/18 03:30	1
PCB-209L	106		30 - 140	07/02/18 12:15	07/09/18 03:30	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: MB 140-21673/7-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21673

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	104		40 - 125	07/02/18 12:15	07/09/18 03:30	1
PCB-111L	104		40 - 125	07/02/18 12:15	07/09/18 03:30	1
PCB-178L	112		40 - 125	07/02/18 12:15	07/09/18 03:30	1

Lab Sample ID: LCS 140-21673/8-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	0.936		ng/L		94	50 - 150
PCB-3	1.00	0.983		ng/L		98	50 - 150
PCB-4	1.00	1.02		ng/L		102	50 - 150
PCB-15	1.00	1.11		ng/L		111	50 - 150
PCB-19	1.00	1.11		ng/L		111	50 - 150
PCB-37	1.00	1.03		ng/L		103	50 - 150
PCB-54	1.00	1.06		ng/L		106	50 - 150
PCB-77	1.00	1.03		ng/L		103	50 - 150
PCB-81	1.00	1.01		ng/L		101	50 - 150
PCB-104	1.00	1.10		ng/L		110	50 - 150
PCB-105	1.00	1.03		ng/L		103	50 - 150
PCB-114	1.00	1.10		ng/L		110	50 - 150
PCB-118	1.00	1.09		ng/L		109	50 - 150
PCB-123	1.00	1.16		ng/L		116	50 - 150
PCB-126	1.00	1.13		ng/L		113	50 - 150
PCB-155	1.00	1.04		ng/L		104	50 - 150
PCB-156	2.00	2.17	C	ng/L		109	50 - 150
PCB-157	2.00	2.17	C156	ng/L		109	50 - 150
PCB-167	1.00	1.11		ng/L		111	50 - 150
PCB-169	1.00	0.984		ng/L		98	50 - 150
PCB-188	1.00	1.03		ng/L		103	50 - 150
PCB-189	1.00	1.13		ng/L		113	50 - 150
PCB-202	1.00	0.935		ng/L		93	50 - 150
PCB-205	1.00	1.17		ng/L		117	50 - 150
PCB-206	1.00	0.995		ng/L		99	50 - 150
PCB-208	1.00	1.03		ng/L		103	50 - 150
PCB-209	1.00	1.09		ng/L		109	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	57		30 - 140
PCB-3L	58		30 - 140
PCB-4L	69		30 - 140
PCB-15L	74		30 - 140
PCB-19L	80		30 - 140
PCB-37L	86		30 - 140
PCB-54L	75		30 - 140
PCB-77L	82		30 - 140
PCB-81L	81		30 - 140
PCB-104L	64		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-78278-3

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

Lab Sample ID: LCS 140-21673/8-A

Matrix: Water

Analysis Batch: 21781

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21673

<i>Isotope Dilution</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
PCB-105L	86		30 - 140
PCB-114L	85		30 - 140
PCB-118L	83		30 - 140
PCB-123L	81		30 - 140
PCB-126L	81		30 - 140
PCB-155L	78		30 - 140
PCB-156L	83	C	30 - 140
PCB-157L	83	C156	30 - 140
PCB-167L	82		30 - 140
PCB-169L	86		30 - 140
PCB-170L	82		30 - 140
PCB-188L	82		30 - 140
PCB-189L	79		30 - 140
PCB-202L	102		30 - 140
PCB-205L	75		30 - 140
PCB-206L	82		30 - 140
PCB-208L	89		30 - 140
PCB-209L	87		30 - 140

<i>Surrogate</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
PCB-28L	106		40 - 125
PCB-111L	105		40 - 125
PCB-178L	109		40 - 125

Lab Chronicle

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

TestAmerica Job ID: 580-78278-3

Client Sample ID: PDI-SG-B096-BL1

Date Collected: 06/20/18 14:22

Date Received: 06/22/18 13:20

Lab Sample ID: 580-78278-1

Matrix: Solid

Percent Solids: 39.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21553	06/27/18 11:40	CLI	TAL KNX
Total/NA	Cleanup	Split			21691	07/03/18 07:34	EBS	TAL KNX
Total/NA	Analysis	1668A		1	21949	07/13/18 09:11	PMP	TAL KNX

Client Sample ID: PDI-SG-B096-BL1-D

Date Collected: 06/20/18 14:22

Date Received: 06/22/18 13:20

Lab Sample ID: 580-78278-2

Matrix: Solid

Percent Solids: 39.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21553	06/27/18 11:40	CLI	TAL KNX
Total/NA	Cleanup	Split			21691	07/03/18 07:34	EBS	TAL KNX
Total/NA	Analysis	1668A		1	21949	07/13/18 10:12	PMP	TAL KNX

Client Sample ID: PDI-SG-B155-BL1

Date Collected: 06/20/18 11:56

Date Received: 06/22/18 13:20

Lab Sample ID: 580-78278-3

Matrix: Solid

Percent Solids: 53.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			21553	06/27/18 11:40	CLI	TAL KNX
Total/NA	Cleanup	Split			21691	07/03/18 07:34	EBS	TAL KNX
Total/NA	Analysis	1668A		5	21991	07/16/18 18:43	JMN	TAL KNX

Client Sample ID: PDI-RB-VV-20181621

Date Collected: 06/21/18 16:45

Date Received: 06/22/18 13:20

Lab Sample ID: 580-78278-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			21673	07/02/18 12:15	SMA	TAL KNX
Total/NA	Analysis	1668A		1	21781	07/09/18 06:35	LKM	TAL KNX

Laboratory References:

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

TestAmerica Seattle

Accreditation/Certification Summary

Client: AECOM

TestAmerica Job ID: 580-78278-3

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: 580-78278-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-78278-1	PDI-SG-B096-BL1	Solid	06/20/18 14:22	06/22/18 13:20
580-78278-2	PDI-SG-B096-BL1-D	Solid	06/20/18 14:22	06/22/18 13:20
580-78278-3	PDI-SG-B155-BL1	Solid	06/20/18 11:56	06/22/18 13:20
580-78278-4	PDI-RB-VV-20181621	Water	06/21/18 16:45	06/22/18 13:20



SURFACE SEDIMENT

CHAIN OF CUSTODY

9.2



580-78278 Chain of Custody

TestAmerica-Seattle		SURFACE SEDIMENT CHAIN OF CUSTODY										580-78278 Chain of Custody								
5755-8th-Street-East Tacoma, WA 98424-1317 Ph: 253-922-2310 Fax: 253-922-5047		Project Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010				Site Contact: Jennifer Ray / Michaela McCoog Laboratory Contact: Elaine-Walker				Date: 6/22/18		COC No: 1								
Client Contact		Analysis Turnaround Time				Carrier: Courier				1 of 1 COCs										
AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Surface Sediment Sample Type: SRS		Calendar (C) or Work Days (W) ☒ 21 days ☐ Other																		
Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060 (104C & 70C)	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:	
PDI-SG-B096-BL1	6/20/2018	14:22	SS		MM	6		x	x	x	x	x	x							
PDI-SG-B096-BL1-D	6/20/2018	14:22	SS		MM	5		x	x	x		x	x							
PDI-SG-B155-BL1	6/20/2018	11:56	SS		MM	6		x	x	x	x	x	x							
PDI-RB-VV-20181621	6/21/2018	16:45	W		MM	8								x	x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)							Sample Disposal ☐ Return To Client ☒ Disposal By Lab ☒ Archive For 12 Months													
Special Instructions/QC Requirements & Comments: Separate reports for each lab.																				
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:	Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:	Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:	Relinquished by:	Company:	Date/Time:
	AECOM	6/22/18 1205		M.E.	6/22/18 1320		SEA-TA	6/23/18 1500												

±125 = 2.5/2.5 w/L.S.

estAmerica



estAmerica

Ver: 09/20/2016

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	RT: 0.6°C GT: 0.6°C
2. Were ambient air containers received intact?			/	☐ Checked in lab	1 cooler FedExed
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA	2 KFF 9/12/18 0750.567g custody seal intact
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : JCB Correction factor: 0.0°C	/			☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt	W6/23/18, RC-ND
5. Were all of the sample containers received intact?	/			☐ Containers, Broken	
6. Were samples received in appropriate containers?	/			☐ Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received	
8. Were all of the samples listed on the COC received?	/			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			☐ COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?		/		☐ Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			☐ COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			☐ COC No tests on COC	
13. Is the matrix of the samples noted?	/			☐ COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ COC Incorrect/Incomplete	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: 7194 2220/04	/			☐ 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: _____					

Sample Receiving Associate: KE WH Date: 6/23/18

QA026R30.doc, 080916

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-78278-3

Login Number: 78278

List Source: TestAmerica Seattle

List Number: 1

Creator: Rogers, Angeline D

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: 580-78278-3

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)
580-78278-1	PDI-SG-B096-BL1	58	59	75	81	77 q	87	62	84
580-78278-2	PDI-SG-B096-BL1-D	54	59	73	79	85	88	61	87
580-78278-3	PDI-SG-B155-BL1	74	77	72	76	101	86	75	85
LCS 140-21553/17-B	Lab Control Sample	74	73	76	77	79	85	56	82
LCSD 140-21553/18-B	Lab Control Sample Dup	76	74	79	75	90	83	63	82
MB 140-21553/16-B	Method Blank	74	73	76	74	85	81	60	76

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)
580-78278-1	PDI-SG-B096-BL1	85	78	88	87	84	84	85	87
580-78278-2	PDI-SG-B096-BL1-D	86	81	88	87	85	84	87	90
580-78278-3	PDI-SG-B155-BL1	85	81	83	86	83	87	81	80
LCS 140-21553/17-B	Lab Control Sample	81	75	87	87	85	84	82	76
LCSD 140-21553/18-B	Lab Control Sample Dup	82	76	90	90	89	86	82	75
MB 140-21553/16-B	Method Blank	76	78	87	87	86	83	82	76

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)
580-78278-1	PDI-SG-B096-BL1	78 C	78 C156	87	88	80	86	80	102
580-78278-2	PDI-SG-B096-BL1-D	82 C	82 C156	89	94	84	88	76	103
580-78278-3	PDI-SG-B155-BL1	80 C	80 C156	88	91	84	85	81	87
LCS 140-21553/17-B	Lab Control Sample	87 C	87 C156	87	91	80	83	76	90
LCSD 140-21553/18-B	Lab Control Sample Dup	87 C	87 C156	88	91	83	85	77	92
MB 140-21553/16-B	Method Blank	85 C	85 C156	86	90	82	87	79	89

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-78278-1	PDI-SG-B096-BL1	71	82	79	86
580-78278-2	PDI-SG-B096-BL1-D	71	83	74	89
580-78278-3	PDI-SG-B155-BL1	71	77	75	69
LCS 140-21553/17-B	Lab Control Sample	72	81	80	82
LCSD 140-21553/18-B	Lab Control Sample Dup	72	82	80	83
MB 140-21553/16-B	Method Blank	73	84	83	85

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

TestAmerica Seattle

Isotope Dilution Summary

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

TestAmerica Job ID: 580-78278-3

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

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

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)
580-78278-4	PDI-RB-VV-20181621	60	61	80	85	86	93	89	87
LCS 140-21673/8-A	Lab Control Sample	57	58	69	74	80	86	75	82
MB 140-21673/7-A	Method Blank	59	60	79	81	85	94	85	92

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)
580-78278-4	PDI-RB-VV-20181621	87	72	92	93	90	88	87	87
LCS 140-21673/8-A	Lab Control Sample	81	64	86	85	83	81	81	78
MB 140-21673/7-A	Method Blank	91	69	95	93	94	89	91	88

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)
580-78278-4	PDI-RB-VV-20181621	88 C	88 C156	90	92	83	81	80	104
LCS 140-21673/8-A	Lab Control Sample	83 C	83 C156	82	86	82	82	79	102
MB 140-21673/7-A	Method Blank	94 C	94 C156	92	99	92	85	85	110

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-78278-4	PDI-RB-VV-20181621	75	87	90	95
LCS 140-21673/8-A	Lab Control Sample	75	82	89	87
MB 140-21673/7-A	Method Blank	81	98	94	106

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

TestAmerica Seattle

Isotope Dilution Summary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-78278-3

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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