

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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Tel: (253)922-2310

TestAmerica Job ID: 580-77396-3

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

For:

AECOM
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Seattle, Washington 98101

Attn: Karen Mixon

M. Elaine Walker

Authorized for release by:
7/26/2018 4:26:42 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: 580-77396-3

Job ID: 580-77396-3

Laboratory: TestAmerica Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Portland Harbor Pre-Remedial Design

Report Number: 580-77396-3

REVISION 1: JULY 25, 2018

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

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

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

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

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

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

RECEIPT

Six samples were received on 5/18/2018 1:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.3° 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-B137-BL1 (580-77396-1), PDI-SG-B028-BL1 (580-77396-2), PDI-SG-B209-BL1 (580-77396-4), PDI-SG-B225-BL1 (580-77396-5) and PDI-SG-B225-BL1-D (580-77396-6) were analyzed for polychlorinated biphenyls congeners (PCBs) in accordance with EPA Method 1668A. The samples were prepared on 05/31/2018 and analyzed on 06/12/2018.

Several analytes were detected in method blank MB 140-20769/17-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.

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-180517 (580-77396-3) was analyzed for PCB Congeners in accordance with 1668A. The sample was prepared on 05/30/2018 and analyzed on 06/10/2018.

Case Narrative

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

TestAmerica Job ID: 580-77396-3

Job ID: 580-77396-3 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Several analytes were detected in method blank MB 140-20751/11-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

Definitions/Glossary

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

TestAmerica Job ID: 580-77396-3

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.
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
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
C	The compound co-eluted with other compounds
C86	The compound co-eluted with PCB-86
C110	The compound co-eluted with PCB-110
C85	The compound co-eluted with PCB-85
C108	The compound co-eluted with PCB-108
C12	The compound co-eluted with PCB-12
C129	The compound co-eluted with PCB-129
C139	The compound co-eluted with PCB-139
C134	The compound co-eluted with PCB-134
C147	The compound co-eluted with PCB-147
C135	The compound co-eluted with PCB-135
C156	The compound co-eluted with PCB-156
C128	The compound co-eluted with PCB-128
C153	The compound co-eluted with PCB-153
C171	The compound co-eluted with PCB-171
C183	The compound co-eluted with PCB-183
C180	The compound co-eluted with PCB-180
C198	The compound co-eluted with PCB-198
C20	The compound co-eluted with PCB-20
C26	The compound co-eluted with PCB-26
C18	The compound co-eluted with PCB-18
C21	The compound co-eluted with PCB-21
C40	The compound co-eluted with PCB-40
C44	The compound co-eluted with PCB-44
C45	The compound co-eluted with PCB-45
C50	The compound co-eluted with PCB-50
C59	The compound co-eluted with PCB-59
C49	The compound co-eluted with PCB-49
C61	The compound co-eluted with PCB-61
C43	The compound co-eluted with PCB-43
C88	The compound co-eluted with PCB-88
C83	The compound co-eluted with PCB-83

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
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: 580-77396-3

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: 580-77396-3

Client Sample ID: PDI-SG-B137-BL1

Date Collected: 05/16/18 15:50

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-1

Matrix: Solid

Percent Solids: 57.8

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.0099	0.00072	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-2	0.0025	J q	0.0099	0.00076	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-3	ND		0.0099	0.00083	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-4	0.0035	J q	0.020	0.00094	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-5	ND		0.0099	0.00063	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-6	0.0024	J B	0.0099	0.00063	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-7	ND		0.0099	0.00060	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-8	0.0059	J q	0.020	0.00061	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-9	ND		0.0099	0.00070	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-10	ND		0.0099	0.00068	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-11	0.029	B	0.020	0.00058	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-12	ND	C	0.020	0.00058	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-13	ND	C12	0.020	0.00058	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-14	ND		0.0099	0.00053	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-15	0.0051	J q	0.0099	0.00061	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-16	0.010	B	0.0099	0.00025	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-17	0.0069	J q	0.0099	0.00019	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-18	0.017	J C B	0.020	0.00017	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-19	0.0050	J q	0.0099	0.00023	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-20	0.042	C B	0.020	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-21	0.016	J C B	0.020	0.00092	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-22	0.013		0.0099	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-23	ND		0.0099	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-24	ND		0.0099	0.00014	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-25	0.0028	J q	0.0099	0.00094	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-26	0.0079	J C	0.020	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-27	0.0013	J q	0.0099	0.00014	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-28	0.042	B C20	0.020	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-29	0.0079	J C26	0.020	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-30	0.017	J C18 B	0.020	0.00017	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-31	0.031		0.020	0.00091	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-32	0.0078	J B	0.0099	0.00013	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-33	0.016	J B C21	0.020	0.00092	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-34	ND		0.0099	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-35	ND		0.0099	0.00097	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-36	ND		0.0099	0.00088	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-37	0.013		0.0099	0.00091	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-38	ND		0.0099	0.00096	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-39	ND		0.0099	0.00087	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-40	0.026	J C B	0.030	0.00078	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-41	0.026	J B C40	0.030	0.00078	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-42	0.013		0.0099	0.00079	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-43	ND	C	0.020	0.00070	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-44	0.054	C B	0.030	0.00070	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-45	0.010	J C B	0.020	0.00082	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-46	0.0030	J	0.0099	0.00096	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-47	0.054	B C44	0.030	0.00070	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-48	0.0083	J	0.0099	0.00075	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1
PCB-49	0.032	C	0.020	0.00063	ng/g	☆	05/31/18 11:15	06/12/18 08:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B137-BL1

Lab Sample ID: 580-77396-1

Date Collected: 05/16/18 15:50

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 57.8

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.0077	J C	0.020	0.00078	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-51	0.010	J C45 B	0.020	0.00082	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-52	0.072	B	0.0099	0.00082	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-53	0.0077	J C50	0.020	0.00078	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-54	ND		0.0099	0.000075	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-55	ND		0.0099	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-56	0.022		0.0099	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-57	ND		0.0099	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-58	ND		0.0099	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-59	0.0040	J C	0.030	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-60	0.0097	J	0.0099	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-61	0.083	C B	0.040	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-62	0.0040	J C59	0.030	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-63	0.0018	J	0.0099	0.00047	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-64	0.020		0.0099	0.00050	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-65	0.054	B C44	0.030	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-66	0.048	B	0.0099	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-67	0.0012	J q	0.0099	0.00050	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-68	ND		0.0099	0.00047	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-69	0.032	C49	0.020	0.00063	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-70	0.083	C61 B	0.040	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-71	0.026	J B C40	0.030	0.00078	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-72	ND		0.0099	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-73	ND	C43	0.020	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-74	0.083	C61 B	0.040	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-75	0.0040	J C59	0.030	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-76	0.083	C61 B	0.040	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-77	0.0048	J q	0.0099	0.00049	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-78	ND		0.0099	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-79	ND		0.0099	0.00045	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-80	ND		0.0099	0.00046	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-81	ND		0.0099	0.00050	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-82	0.014		0.0099	0.00090	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-83	0.066	C	0.020	0.00086	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-84	0.025		0.0099	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-85	0.020	J C	0.030	0.00065	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-86	0.068	C	0.059	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-87	0.068	C86	0.059	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-88	0.017	J C	0.020	0.00081	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-89	ND		0.0099	0.00088	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-90	0.13	C B	0.030	0.00069	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-91	0.017	J C88	0.020	0.00081	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-92	0.025		0.0099	0.00084	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-93	0.0018	J C	0.020	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-94	ND		0.0099	0.00088	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-95	0.089	q	0.0099	0.00086	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-96	ND		0.0099	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-97	0.068	C86	0.059	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-98	0.0037	J C	0.020	0.00082	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B137-BL1

Lab Sample ID: 580-77396-1

Date Collected: 05/16/18 15:50

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 57.8

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.066	C83	0.020	0.00086	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-100	0.0018	J C93	0.020	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-101	0.13	B C90	0.030	0.00069	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-102	0.0037	J C98	0.020	0.00082	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-103	0.0028	J	0.0099	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-104	ND		0.0099	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-105	0.033		0.0099	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-106	ND		0.0099	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-107	0.0074	J q	0.0099	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-108	0.0039	J C	0.020	0.00098	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-109	0.068	C86	0.059	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-110	0.12	C B	0.020	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-111	ND		0.0099	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-112	ND		0.0099	0.00058	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-113	0.13	B C90	0.030	0.00069	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-114	ND		0.0099	0.00088	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-115	0.12	B C110	0.020	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-116	0.020	J C85	0.030	0.00065	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-117	0.020	J C85	0.030	0.00065	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-118	0.091	B	0.0099	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-119	0.068	C86	0.059	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-120	ND		0.0099	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-121	ND		0.0099	0.00057	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-122	0.0014	J q	0.0099	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-123	0.0022	J	0.0099	0.00087	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-124	0.0039	J C108	0.020	0.00098	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-125	0.068	C86	0.059	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-126	ND		0.0099	0.00093	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-127	ND		0.0099	0.00093	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-128	0.029	C	0.020	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-129	0.22	C B	0.040	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-130	0.010	q	0.0099	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-131	ND		0.0099	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-132	0.066		0.0099	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-133	0.0039	J	0.0099	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-134	0.0078	J C q	0.020	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-135	0.085	C	0.020	0.00026	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-136	0.030		0.0099	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-137	0.0056	J q	0.0099	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-138	0.22	B C129	0.040	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-139	ND	C	0.020	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-140	ND	C139	0.020	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-141	0.045	B	0.0099	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-142	ND		0.0099	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-143	0.0078	J C134 q	0.020	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-144	0.011	q	0.0099	0.00024	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-145	ND		0.0099	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-146	0.035		0.0099	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-147	0.18	C	0.020	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B137-BL1

Lab Sample ID: 580-77396-1

Date Collected: 05/16/18 15:50

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 57.8

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.0099	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-149	0.18	C147	0.020	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-150	0.00041	J q	0.0099	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-151	0.085	C135	0.020	0.00026	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-152	ND		0.0099	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-153	0.21	C B	0.020	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-154	0.0030	J	0.0099	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-155	ND		0.0099	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-156	0.018	J C	0.020	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-157	0.018	J C156	0.020	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-158	0.018		0.0099	0.00096	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-159	0.0035	J	0.0099	0.00099	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-160	0.22	B C129	0.040	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-161	ND		0.0099	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-162	ND		0.0099	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-163	0.22	B C129	0.040	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-164	0.016		0.0099	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-165	ND		0.0099	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-166	0.029	C128	0.020	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-167	0.0069	J	0.0099	0.00071	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-168	0.21	B C153	0.020	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-169	ND		0.0099	0.00080	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-170	0.079	B	0.0099	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-171	0.025	C	0.020	0.00077	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-172	0.015		0.0099	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-173	0.025	C171	0.020	0.00077	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-174	0.093	B	0.0099	0.00079	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-175	0.0012	J q	0.0099	0.00071	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-176	0.011		0.0099	0.00050	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-177	0.053	B	0.0099	0.00080	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-178	0.019		0.0099	0.00074	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-179	0.041	B	0.0099	0.00055	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-180	0.21	C B	0.020	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-181	ND		0.0099	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-182	ND		0.0099	0.00065	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-183	0.063	C	0.020	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-184	ND		0.0099	0.00055	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-185	0.063	C183	0.020	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-186	ND		0.0099	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-187	0.12	B	0.0099	0.00067	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-188	ND		0.0099	0.00050	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-189	0.0032	J	0.0099	0.00073	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-190	0.014	q	0.0099	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-191	0.0027	J q	0.0099	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-192	ND		0.0099	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-193	0.21	C180 B	0.020	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-194	0.063	B	0.0099	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-195	0.021		0.0099	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-196	0.032		0.0099	0.00060	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B137-BL1

Lab Sample ID: 580-77396-1

Date Collected: 05/16/18 15:50

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 57.8

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0023	J q	0.0099	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-198	0.086	C	0.020	0.00063	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-199	0.086	C198	0.020	0.00063	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-200	0.0065	J q	0.0099	0.00045	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-201	0.010		0.0099	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-202	0.021		0.0099	0.00049	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-203	0.050		0.0099	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-204	ND		0.0099	0.00045	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-205	0.0026	J	0.0099	0.00080	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-206	0.18	B	0.0099	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-207	0.0095	J q	0.0099	0.00095	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-208	0.058		0.0099	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1
PCB-209	0.23		0.0099	0.00072	ng/g	☼	05/31/18 11:15	06/12/18 08:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	57		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-3L	62		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-4L	75		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-15L	83		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-19L	79		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-37L	86		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-54L	78		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-77L	90		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-81L	86		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-104L	82		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-105L	85		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-114L	85		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-118L	85		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-123L	87		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-126L	87		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-155L	93		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-156L	86	C	30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-157L	86	C156	30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-167L	85		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-169L	79		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-170L	82		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-188L	80		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-189L	90		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-202L	92		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-205L	78		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-206L	76		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-208L	76		30 - 140	05/31/18 11:15	06/12/18 08:27	1
PCB-209L	71		30 - 140	05/31/18 11:15	06/12/18 08:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	77		40 - 125	05/31/18 11:15	06/12/18 08:27	1
PCB-111L	82		40 - 125	05/31/18 11:15	06/12/18 08:27	1
PCB-178L	82		40 - 125	05/31/18 11:15	06/12/18 08:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B028-BL1

Date Collected: 05/16/18 13:00

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-2

Matrix: Solid

Percent Solids: 38.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.012	J	0.013	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-2	0.014	q	0.013	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-3	0.031		0.013	0.00046	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-4	0.084		0.026	0.00086	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-5	ND		0.013	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-6	0.037	B	0.013	0.00055	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-7	0.0038	J	0.013	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-8	0.11		0.026	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-9	0.0067	J	0.013	0.00061	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-10	0.0021	J q	0.013	0.00060	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-11	0.11	B	0.026	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-12	0.017	J C	0.026	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-13	0.017	J C12	0.026	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-14	ND		0.013	0.00047	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-15	0.16		0.013	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-16	0.040	B	0.013	0.00077	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-17	0.12		0.013	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-18	0.16	C B	0.026	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-19	0.047		0.013	0.00072	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-20	0.50	C B	0.026	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-21	0.093	C B	0.026	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-22	0.095		0.013	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-23	ND		0.013	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-24	0.0035	J	0.013	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-25	0.039		0.013	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-26	0.070	C	0.026	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-27	0.024		0.013	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-28	0.50	C20 B	0.026	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-29	0.070	C26	0.026	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-30	0.16	C18 B	0.026	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-31	0.26		0.026	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-32	0.12	B	0.013	0.00040	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-33	0.093	C21 B	0.026	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-34	ND		0.013	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-35	ND		0.013	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-36	ND		0.013	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-37	0.15		0.013	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-38	ND		0.013	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-39	0.0028	J q	0.013	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-40	0.47	C B	0.038	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-41	0.47	C40 B	0.038	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-42	0.23		0.013	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-43	0.033	C	0.026	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-44	0.90	C B	0.038	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-45	0.15	C B	0.026	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-46	0.047		0.013	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-47	0.90	C44 B	0.038	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-48	0.12		0.013	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-49	0.58	C	0.026	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B028-BL1

Lab Sample ID: 580-77396-2

Date Collected: 05/16/18 13:00

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 38.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.15	C	0.026	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-51	0.15	C45 B	0.026	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-52	1.0	B	0.013	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-53	0.15	C50	0.026	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-54	0.0066	J	0.013	0.000071	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-55	0.023	q	0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-56	0.43		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-57	ND		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-58	ND		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-59	0.073	C	0.038	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-60	0.22		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-61	1.3	C B	0.051	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-62	0.073	C59	0.038	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-63	0.029	q	0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-64	0.36		0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-65	0.90	C44 B	0.038	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-66	1.0	B	0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-67	0.016	q	0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-68	0.0063	J B	0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-69	0.58	C49	0.026	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-70	1.3	C61 B	0.051	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-71	0.47	C40 B	0.038	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-72	0.012	J	0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-73	0.033	C43	0.026	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-74	1.3	C61 B	0.051	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-75	0.073	C59	0.038	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-76	1.3	C61 B	0.051	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-77	0.10		0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-78	ND		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-79	0.0087	J	0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-80	ND		0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-81	ND		0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-82	0.16		0.013	0.00024	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-83	0.62	C	0.026	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-84	0.25		0.013	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-85	0.22	C	0.038	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-86	0.65	C	0.077	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-87	0.65	C86	0.077	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-88	0.17	C	0.026	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-89	0.021		0.013	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-90	0.81	C B	0.038	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-91	0.17	C88	0.026	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-92	0.16		0.013	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-93	0.024	J q C	0.026	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-94	0.0085	J q	0.013	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-95	0.64		0.013	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-96	0.012	J q	0.013	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-97	0.65	C86	0.077	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-98	0.052	C	0.026	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B028-BL1

Lab Sample ID: 580-77396-2

Date Collected: 05/16/18 13:00

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 38.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.62	C83	0.026	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-100	0.024	J q C93	0.026	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-101	0.81	C90 B	0.038	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-102	0.052	C98	0.026	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-103	0.012	J	0.013	0.00020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-104	ND		0.013	0.00016	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-105	0.43		0.013	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-106	ND		0.013	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-107	0.073		0.013	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-108	0.037	C	0.026	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-109	0.65	C86	0.077	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-110	0.96	C B	0.026	0.00015	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-111	ND		0.013	0.00014	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-112	0.0062	J q	0.013	0.00015	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-113	0.81	C90 B	0.038	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-114	0.029		0.013	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-115	0.96	C110 B	0.026	0.00015	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-116	0.22	C85	0.038	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-117	0.22	C85	0.038	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-118	0.82	B	0.013	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-119	0.65	C86	0.077	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-120	ND		0.013	0.00014	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-121	ND		0.013	0.00015	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-122	0.020		0.013	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-123	0.023		0.013	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-124	0.037	C108	0.026	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-125	0.65	C86	0.077	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-126	0.0039	J	0.013	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-127	ND		0.013	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-128	0.14	C	0.026	0.00096	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-129	0.85	C B	0.051	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-130	0.061		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-131	0.012	J	0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-132	0.27		0.013	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-133	0.014	q	0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-134	0.049	C	0.026	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-135	0.27	C	0.026	0.000065	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-136	0.095		0.013	0.000047	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-137	0.040		0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-138	0.85	C129 B	0.051	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-139	0.017	J C	0.026	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-140	0.017	J C139	0.026	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-141	0.16	B	0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-142	ND		0.013	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-143	0.049	C134	0.026	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-144	0.032		0.013	0.000061	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-145	ND		0.013	0.000047	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-146	0.13		0.013	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-147	0.61	C	0.026	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B028-BL1

Lab Sample ID: 580-77396-2

Date Collected: 05/16/18 13:00

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 38.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.00090	J q	0.013	0.000063	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-149	0.61	C147	0.026	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-150	0.0011	J q	0.013	0.000042	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-151	0.27	C135	0.026	0.000065	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-152	0.00089	J q	0.013	0.000045	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-153	0.65	C B	0.026	0.00085	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-154	0.016		0.013	0.000054	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-155	0.00035	J	0.013	0.000043	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-156	0.10	C	0.026	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-157	0.10	C156	0.026	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-158	0.087		0.013	0.00075	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-159	0.0087	J	0.013	0.00078	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-160	0.85	C129 B	0.051	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-161	ND		0.013	0.00081	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-162	ND		0.013	0.00077	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-163	0.85	C129 B	0.051	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-164	0.062		0.013	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-165	ND		0.013	0.00092	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-166	0.14	C128	0.026	0.00096	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-167	0.032		0.013	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-168	0.65	C153 B	0.026	0.00085	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-169	ND		0.013	0.00061	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-170	0.22	B	0.013	0.00013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-171	0.070	C	0.026	0.00013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-172	0.040		0.013	0.00012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-173	0.070	C171	0.026	0.00013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-174	0.24	B	0.013	0.00013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-175	0.0072	J q	0.013	0.00012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-176	0.027		0.013	0.000082	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-177	0.14	B	0.013	0.00013	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-178	0.049		0.013	0.00012	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-179	0.095	B	0.013	0.000090	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-180	0.47	C B	0.026	0.000096	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-181	ND		0.013	0.00011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-182	ND		0.013	0.00011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-183	0.14	C	0.026	0.00011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-184	ND		0.013	0.000091	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-185	0.14	C183	0.026	0.00011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-186	ND		0.013	0.000087	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-187	0.28	B	0.013	0.00011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-188	ND		0.013	0.000082	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-189	0.0089	J	0.013	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-190	0.044		0.013	0.000083	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-191	0.0095	J q	0.013	0.000084	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-192	ND		0.013	0.000089	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-193	0.47	C180 B	0.026	0.000096	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-194	0.12	B	0.013	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-195	0.051		0.013	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-196	0.054		0.013	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B028-BL1

Lab Sample ID: 580-77396-2

Date Collected: 05/16/18 13:00

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 38.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0050	J	0.013	0.00020	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-198	0.13	C	0.026	0.00031	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-199	0.13	C198	0.026	0.00031	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-200	0.013		0.013	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-201	0.013		0.013	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-202	0.023		0.013	0.00024	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-203	0.078		0.013	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-204	ND		0.013	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-205	0.0068	J	0.013	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-206	0.079	B	0.013	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-207	0.0081	J	0.013	0.00072	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-208	0.026		0.013	0.00078	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1
PCB-209	0.077		0.013	0.00031	ng/g	☼	05/31/18 11:15	06/12/18 15:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	61		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-3L	63		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-4L	75		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-15L	85		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-19L	80		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-37L	85		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-54L	80		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-77L	84		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-81L	82		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-104L	88		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-105L	83		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-114L	81		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-118L	85		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-123L	85		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-126L	83		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-155L	96		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-156L	82	C	30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-157L	82	C156	30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-167L	81		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-169L	80		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-170L	83		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-188L	83		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-189L	93		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-202L	92		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-205L	75		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-206L	75		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-208L	74		30 - 140	05/31/18 11:15	06/12/18 15:13	1
PCB-209L	68		30 - 140	05/31/18 11:15	06/12/18 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	77		40 - 125	05/31/18 11:15	06/12/18 15:13	1
PCB-111L	88		40 - 125	05/31/18 11:15	06/12/18 15:13	1
PCB-178L	84		40 - 125	05/31/18 11:15	06/12/18 15:13	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-RB-VV-180517

Lab Sample ID: 580-77396-3

Date Collected: 05/17/18 17:15

Matrix: Water

Date Received: 05/18/18 13:10

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.039	0.00034	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-2	0.0019	J q	0.039	0.00041	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-3	ND		0.039	0.00050	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-4	ND		0.058	0.011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-5	ND		0.039	0.0093	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-6	ND		0.039	0.0082	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-7	ND		0.039	0.0084	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-8	0.018	J	0.058	0.0076	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-9	ND		0.039	0.0086	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-10	ND		0.039	0.0092	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-11	0.032	J B	0.058	0.0080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-12	ND	C	0.078	0.0083	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-13	ND	C12	0.078	0.0083	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-14	ND		0.039	0.0071	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-15	0.014	J	0.039	0.0093	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-16	0.011	J q	0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-17	0.0070	J q	0.039	0.0011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-18	0.022	J C q	0.078	0.00094	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-19	ND		0.039	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-20	0.020	J C B	0.078	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-21	0.0094	J C q	0.078	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-22	0.011	J B	0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-23	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-24	ND		0.039	0.00090	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-25	ND		0.039	0.0011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-26	0.0032	J C	0.078	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-27	ND		0.039	0.00078	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-28	0.020	J B C20	0.078	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-29	0.0032	J C26	0.078	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-30	0.022	J C18 q	0.078	0.00094	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-31	0.0052	J q	0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-32	0.0051	J	0.039	0.00075	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-33	0.0094	J C21 q	0.078	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-34	ND		0.039	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-35	ND		0.039	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-36	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-37	0.0052	J	0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-38	ND		0.039	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-39	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-40	0.0046	J C q	0.12	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-41	0.0046	J q C40	0.12	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-42	0.0031	J q	0.039	0.00081	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-43	ND	C	0.078	0.00075	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-44	0.013	J C B q	0.12	0.00071	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-45	0.0020	J C q	0.078	0.00084	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-46	ND		0.039	0.0010	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-47	0.013	J B C44 q	0.12	0.00071	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-48	0.0019	J q	0.039	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-49	ND	C	0.078	0.00066	ng/L		05/30/18 13:51	06/10/18 20:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-RB-VV-180517

Lab Sample ID: 580-77396-3

Date Collected: 05/17/18 17:15

Matrix: Water

Date Received: 05/18/18 13:10

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	ND	C	0.078	0.00078	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-51	0.0020	J C45 q	0.078	0.00084	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-52	0.0089	J	0.039	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-53	ND	C50	0.078	0.00078	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-54	ND		0.039	0.00010	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-55	ND		0.039	0.00059	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-56	ND		0.039	0.00059	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-57	ND		0.039	0.00059	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-58	ND		0.039	0.00060	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-59	ND	C	0.12	0.00057	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-60	ND		0.039	0.00060	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-61	0.0055	J C q	0.16	0.00056	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-62	ND	C59	0.12	0.00057	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-63	ND		0.039	0.00054	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-64	0.0042	J	0.039	0.00054	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-65	0.013	J B C44 q	0.12	0.00071	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-66	0.0022	J q	0.039	0.00056	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-67	ND		0.039	0.00051	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-68	ND		0.039	0.00053	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-69	ND	C49	0.078	0.00066	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-70	0.0055	J C61 q	0.16	0.00056	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-71	0.0046	J q C40	0.12	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-72	ND		0.039	0.00058	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-73	ND	C43	0.078	0.00075	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-74	0.0055	J C61 q	0.16	0.00056	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-75	ND	C59	0.12	0.00057	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-76	0.0055	J C61 q	0.16	0.00056	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-77	ND		0.039	0.00058	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-78	ND		0.039	0.00060	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-79	ND		0.039	0.00052	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-80	ND		0.039	0.00051	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-81	ND		0.039	0.00053	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-82	ND		0.039	0.00017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-83	ND	C	0.078	0.00016	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-84	ND		0.039	0.00017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-85	ND	C	0.12	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-86	ND	C	0.23	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-87	ND	C86	0.23	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-88	ND	C	0.078	0.00016	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-89	ND		0.039	0.00017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-90	ND	C	0.12	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-91	ND	C88	0.078	0.00016	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-92	ND		0.039	0.00015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-93	ND	C	0.078	0.00015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-94	ND		0.039	0.00017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-95	ND		0.039	0.00016	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-96	ND		0.039	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-97	ND	C86	0.23	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-98	ND	C	0.078	0.00014	ng/L		05/30/18 13:51	06/10/18 20:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-RB-VV-180517

Lab Sample ID: 580-77396-3

Date Collected: 05/17/18 17:15

Matrix: Water

Date Received: 05/18/18 13:10

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	ND	C83	0.078	0.00016	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-100	ND	C93	0.078	0.00015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-101	ND	C90	0.12	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-102	ND	C98	0.078	0.00014	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-103	ND		0.039	0.00015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-104	ND		0.039	0.00011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-105	ND		0.039	0.00075	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-106	ND		0.039	0.00079	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-107	ND		0.039	0.00085	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-108	ND	C	0.078	0.00081	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-109	ND	C86	0.23	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-110	ND	C	0.078	0.00011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-111	ND		0.039	0.00010	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-112	ND		0.039	0.00011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-113	ND	C90	0.12	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-114	ND		0.039	0.00074	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-115	ND	C110	0.078	0.00011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-116	ND	C85	0.12	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-117	ND	C85	0.12	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-118	0.0021	J q	0.039	0.00074	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-119	ND	C86	0.23	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-120	ND		0.039	0.00011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-121	ND		0.039	0.00011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-122	ND		0.039	0.00091	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-123	ND		0.039	0.00083	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-124	ND	C108	0.078	0.00081	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-125	ND	C86	0.23	0.00013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-126	ND		0.039	0.00081	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-127	ND		0.039	0.00079	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-128	ND	C	0.078	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-129	ND	C	0.16	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-130	ND		0.039	0.0020	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-131	ND		0.039	0.0021	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-132	ND		0.039	0.0019	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-133	ND		0.039	0.0019	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-134	ND	C	0.078	0.0020	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-135	ND	C	0.078	0.000091	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-136	ND		0.039	0.000065	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-137	ND		0.039	0.0017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-138	ND	C129	0.16	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-139	ND	C	0.078	0.0017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-140	ND	C139	0.078	0.0017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-141	ND		0.039	0.0017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-142	ND		0.039	0.0019	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-143	ND	C134	0.078	0.0020	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-144	ND		0.039	0.000082	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-145	ND		0.039	0.000062	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-146	ND		0.039	0.0017	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-147	ND	C	0.078	0.0019	ng/L		05/30/18 13:51	06/10/18 20:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-RB-VV-180517

Lab Sample ID: 580-77396-3

Date Collected: 05/17/18 17:15

Matrix: Water

Date Received: 05/18/18 13:10

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.039	0.000088	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-149	ND	C147	0.078	0.0019	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-150	ND		0.039	0.000060	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-151	ND	C135	0.078	0.000091	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-152	ND		0.039	0.000064	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-153	ND	C	0.078	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-154	ND		0.039	0.000071	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-155	ND		0.039	0.000060	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-156	ND	C	0.078	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-157	ND	C156	0.078	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-158	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-159	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-160	ND	C129	0.16	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-161	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-162	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-163	ND	C129	0.16	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-164	ND		0.039	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-165	ND		0.039	0.0014	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-166	ND	C128	0.078	0.0015	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-167	ND		0.039	0.00097	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-168	ND	C153	0.078	0.0013	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-169	ND		0.039	0.00097	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-170	ND		0.039	0.0011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-171	ND	C	0.078	0.0011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-172	ND		0.039	0.0011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-173	ND	C171	0.078	0.0011	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-174	ND		0.039	0.00099	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-175	ND		0.039	0.00096	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-176	ND		0.039	0.00072	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-177	ND		0.039	0.0010	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-178	ND		0.039	0.0010	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-179	ND		0.039	0.00076	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-180	ND	C	0.078	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-181	ND		0.039	0.00095	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-182	ND		0.039	0.00092	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-183	ND	C	0.078	0.00093	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-184	ND		0.039	0.00078	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-185	ND	C183	0.078	0.00093	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-186	ND		0.039	0.00076	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-187	ND		0.039	0.00089	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-188	ND		0.039	0.00068	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-189	ND		0.039	0.0012	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-190	ND		0.039	0.00069	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-191	ND		0.039	0.00072	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-192	ND		0.039	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-193	ND	C180	0.078	0.00080	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-194	ND		0.039	0.0024	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-195	ND		0.039	0.0027	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-196	ND		0.039	0.00096	ng/L		05/30/18 13:51	06/10/18 20:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-RB-VV-180517

Lab Sample ID: 580-77396-3

Date Collected: 05/17/18 17:15

Matrix: Water

Date Received: 05/18/18 13:10

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.039	0.00074	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-198	ND	C	0.078	0.00098	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-199	ND	C198	0.078	0.00098	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-200	ND		0.039	0.00066	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-201	ND		0.039	0.00067	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-202	ND		0.039	0.00075	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-203	ND		0.039	0.00087	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-204	ND		0.039	0.00074	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-205	ND		0.039	0.0021	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-206	ND		0.039	0.0053	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-207	ND		0.039	0.0039	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-208	ND		0.039	0.0040	ng/L		05/30/18 13:51	06/10/18 20:27	1
PCB-209	ND		0.039	0.00063	ng/L		05/30/18 13:51	06/10/18 20:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	87		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-3L	86		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-4L	83		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-15L	78		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-19L	84		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-37L	90		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-54L	86		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-77L	89		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-81L	86		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-104L	80		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-105L	92		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-114L	90		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-118L	91		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-123L	87		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-126L	90		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-155L	84		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-156L	100	C	30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-157L	100	C156	30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-167L	90		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-169L	98		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-170L	79		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-188L	84		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-189L	89		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-202L	93		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-205L	76		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-206L	83		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-208L	78		30 - 140				05/30/18 13:51	06/10/18 20:27	1
PCB-209L	78		30 - 140				05/30/18 13:51	06/10/18 20:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	108		40 - 125				05/30/18 13:51	06/10/18 20:27	1
PCB-111L	100		40 - 125				05/30/18 13:51	06/10/18 20:27	1
PCB-178L	96		40 - 125				05/30/18 13:51	06/10/18 20:27	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B209-BL1

Date Collected: 05/17/18 12:12

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-4

Matrix: Solid

Percent Solids: 72.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0047	J q	0.0098	0.00020	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-2	0.0039	J q	0.0098	0.00022	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-3	0.0038	J	0.0098	0.00024	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-4	0.014	J q	0.020	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-5	ND		0.0098	0.00063	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-6	0.0086	J B	0.0098	0.00063	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-7	0.00093	J q	0.0098	0.00060	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-8	0.024		0.020	0.00061	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-9	0.0020	J	0.0098	0.00070	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-10	ND		0.0098	0.00068	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-11	0.029	B	0.020	0.00058	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-12	0.0038	J C	0.020	0.00058	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-13	0.0038	J C12	0.020	0.00058	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-14	ND		0.0098	0.00053	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-15	0.021		0.0098	0.00060	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-16	0.027	q B	0.0098	0.00053	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-17	0.034		0.0098	0.00041	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-18	0.075	C B	0.020	0.00036	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-19	0.011	q	0.0098	0.00050	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-20	0.13	C B	0.020	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-21	0.040	C B	0.020	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-22	0.039		0.0098	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-23	ND		0.0098	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-24	0.00076	J q	0.0098	0.00031	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-25	0.018		0.0098	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-26	0.027	C	0.020	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-27	0.0076	J	0.0098	0.00030	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-28	0.13	C20 B	0.020	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-29	0.027	C26	0.020	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-30	0.075	C18 B	0.020	0.00036	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-31	0.097		0.020	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-32	0.034	B	0.0098	0.00028	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-33	0.040	C21 B	0.020	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-34	ND		0.0098	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-35	0.0029	J	0.0098	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-36	ND		0.0098	0.00099	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-37	0.035		0.0098	0.0010	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-38	ND		0.0098	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-39	ND		0.0098	0.00098	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-40	0.16	C B	0.029	0.0014	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-41	0.16	C40 B	0.029	0.0014	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-42	0.085		0.0098	0.0014	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-43	0.0095	J C	0.020	0.0013	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-44	0.31	C B	0.029	0.0012	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-45	0.059	C B	0.020	0.0015	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-46	0.015	q	0.0098	0.0017	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-47	0.31	C44 B	0.029	0.0012	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-48	0.038		0.0098	0.0013	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1
PCB-49	0.17	C	0.020	0.0011	ng/g	☆	05/31/18 11:15	06/12/18 16:17	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B209-BL1

Lab Sample ID: 580-77396-4

Date Collected: 05/17/18 12:12

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 72.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.049	C	0.020	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-51	0.059	C45 B	0.020	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-52	0.41	B	0.0098	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-53	0.049	C50	0.020	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-54	0.00089	J q	0.0098	0.000053	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-55	0.0047	J q	0.0098	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-56	0.13		0.0098	0.00096	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-57	ND		0.0098	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-58	ND		0.0098	0.00093	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-59	0.025	J C	0.029	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-60	0.066		0.0098	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-61	0.33	C B	0.039	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-62	0.025	J C59	0.029	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-63	0.0072	J q	0.0098	0.00084	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-64	0.12		0.0098	0.00088	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-65	0.31	C44 B	0.029	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-66	0.28	B	0.0098	0.00092	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-67	0.0050	J q	0.0098	0.00089	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-68	ND		0.0098	0.00084	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-69	0.17	C49	0.020	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-70	0.33	C61 B	0.039	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-71	0.16	C40 B	0.029	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-72	ND		0.0098	0.00095	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-73	0.0095	J C43	0.020	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-74	0.33	C61 B	0.039	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-75	0.025	J C59	0.029	0.00094	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-76	0.33	C61 B	0.039	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-77	0.029		0.0098	0.00088	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-78	ND		0.0098	0.00093	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-79	0.0031	J q	0.0098	0.00080	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-80	ND		0.0098	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-81	ND		0.0098	0.00087	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-82	0.086		0.0098	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-83	0.31	C	0.020	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-84	0.14		0.0098	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-85	0.11	C	0.029	0.00048	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-86	0.34	C	0.059	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-87	0.34	C86	0.059	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-88	0.080	C	0.020	0.00060	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-89	0.0075	J q	0.0098	0.00065	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-90	0.54	C B	0.029	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-91	0.080	C88	0.020	0.00060	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-92	0.10		0.0098	0.00062	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-93	0.013	J C	0.020	0.00062	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-94	ND		0.0098	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-95	0.47		0.0098	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-96	0.0056	J	0.0098	0.00049	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-97	0.34	C86	0.059	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-98	0.017	J q C	0.020	0.00061	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B209-BL1

Lab Sample ID: 580-77396-4

Date Collected: 05/17/18 12:12

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 72.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.31	C83	0.020	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-100	0.013	J C93	0.020	0.00062	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-101	0.54	C90 B	0.029	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-102	0.017	J q C98	0.020	0.00061	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-103	0.0047	J	0.0098	0.00057	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-104	ND		0.0098	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-105	0.18		0.0098	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-106	ND		0.0098	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-107	0.028		0.0098	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-108	0.019	J C	0.020	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-109	0.34	C86	0.059	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-110	0.60	C B	0.020	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-111	ND		0.0098	0.00039	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-112	0.0034	J	0.0098	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-113	0.54	C90 B	0.029	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-114	0.011		0.0098	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-115	0.60	C110 B	0.020	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-116	0.11	C85	0.029	0.00048	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-117	0.11	C85	0.029	0.00048	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-118	0.35	B	0.0098	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-119	0.34	C86	0.059	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-120	ND		0.0098	0.00039	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-121	ND		0.0098	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-122	0.0079	J	0.0098	0.0027	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-123	0.0098		0.0098	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-124	0.019	J C108	0.020	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-125	0.34	C86	0.059	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-126	ND		0.0098	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-127	ND		0.0098	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-128	0.13	C	0.020	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-129	1.1	C B	0.039	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-130	0.062		0.0098	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-131	0.0098	q	0.0098	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-132	0.34		0.0098	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-133	0.019		0.0098	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-134	0.061	C	0.020	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-135	0.41	C	0.020	0.00024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-136	0.13		0.0098	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-137	0.026	q	0.0098	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-138	1.1	C129 B	0.039	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-139	0.011	J q C	0.020	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-140	0.011	J q C139	0.020	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-141	0.30	B	0.0098	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-142	ND		0.0098	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-143	0.061	C134	0.020	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-144	0.063		0.0098	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-145	ND		0.0098	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-146	0.17		0.0098	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-147	0.94	C	0.020	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B209-BL1

Lab Sample ID: 580-77396-4

Date Collected: 05/17/18 12:12

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 72.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0015	J q	0.0098	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-149	0.94	C147	0.020	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-150	0.0020	J	0.0098	0.00016	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-151	0.41	C135	0.020	0.00024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-152	ND		0.0098	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-153	1.1	C B	0.020	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-154	0.011		0.0098	0.00020	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-155	0.00063	J q	0.0098	0.00016	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-156	0.092	C	0.020	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-157	0.092	C156	0.020	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-158	0.12		0.0098	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-159	0.019		0.0098	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-160	1.1	C129 B	0.039	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-161	ND		0.0098	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-162	ND		0.0098	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-163	1.1	C129 B	0.039	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-164	0.083		0.0098	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-165	ND		0.0098	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-166	0.13	C128	0.020	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-167	0.038		0.0098	0.00097	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-168	1.1	C153 B	0.020	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-169	ND		0.0098	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-170	0.53	B	0.0098	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-171	0.17	C	0.020	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-172	0.099		0.0098	0.00028	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-173	0.17	C171	0.020	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-174	0.57	B	0.0098	0.00030	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-175	0.026		0.0098	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-176	0.069		0.0098	0.00019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-177	0.32	B	0.0098	0.00030	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-178	0.11		0.0098	0.00028	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-179	0.20	B	0.0098	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-180	1.2	C B	0.020	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-181	0.017		0.0098	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-182	0.0051	J q	0.0098	0.00024	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-183	0.38	C	0.020	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-184	0.010	q	0.0098	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-185	0.38	C183	0.020	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-186	ND		0.0098	0.00020	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-187	0.63	B	0.0098	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-188	0.0064	J	0.0098	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-189	0.021		0.0098	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-190	0.11		0.0098	0.00019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-191	0.031		0.0098	0.00019	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-192	ND		0.0098	0.00020	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-193	1.2	C180 B	0.020	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-194	0.30	B	0.0098	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-195	0.13		0.0098	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-196	0.13		0.0098	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B209-BL1

Lab Sample ID: 580-77396-4

Date Collected: 05/17/18 12:12

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 72.7

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.015		0.0098	0.00039	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-198	0.36	C	0.020	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-199	0.36	C198	0.020	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-200	0.033		0.0098	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-201	0.043		0.0098	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-202	0.062		0.0098	0.00046	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-203	0.17		0.0098	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-204	0.0026	J q	0.0098	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-205	0.017		0.0098	0.00085	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-206	0.26	q B	0.0098	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-207	0.020		0.0098	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-208	0.050		0.0098	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1
PCB-209	0.17		0.0098	0.00057	ng/g	☼	05/31/18 11:15	06/12/18 16:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	59		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-3L	61		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-4L	71		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-15L	82		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-19L	72		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-37L	83		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-54L	78		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-77L	86		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-81L	86		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-104L	85		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-105L	84		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-114L	83		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-118L	86		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-123L	85		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-126L	86		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-155L	95		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-156L	85	C	30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-157L	85	C156	30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-167L	83		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-169L	82		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-170L	81		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-188L	85		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-189L	92		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-202L	92		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-205L	77		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-206L	72		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-208L	73		30 - 140	05/31/18 11:15	06/12/18 16:17	1
PCB-209L	67		30 - 140	05/31/18 11:15	06/12/18 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	76		40 - 125	05/31/18 11:15	06/12/18 16:17	1
PCB-111L	87		40 - 125	05/31/18 11:15	06/12/18 16:17	1
PCB-178L	85		40 - 125	05/31/18 11:15	06/12/18 16:17	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1

Date Collected: 05/17/18 14:40

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-5

Matrix: Solid

Percent Solids: 39.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0093	J	0.012	0.00028	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-2	0.0078	J q	0.012	0.00030	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-3	0.0083	J	0.012	0.00033	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-4	0.031		0.025	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-5	ND		0.012	0.00077	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-6	0.017	B	0.012	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-7	0.0024	J q	0.012	0.00073	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-8	0.044		0.025	0.00075	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-9	0.0037	J q	0.012	0.00085	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-10	ND		0.012	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-11	0.074	B	0.025	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-12	0.011	J C	0.025	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-13	0.011	J C12	0.025	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-14	ND		0.012	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-15	0.037		0.012	0.00075	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-16	0.067	B	0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-17	0.067	q	0.012	0.00084	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-18	0.16	C B	0.025	0.00074	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-19	0.032		0.012	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-20	0.29	C B	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-21	0.12	C B	0.025	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-22	0.087		0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-23	ND		0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-24	0.0018	J q	0.012	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-25	0.036		0.012	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-26	0.055	C	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-27	0.015		0.012	0.00063	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-28	0.29	C20 B	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-29	0.055	C26	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-30	0.16	C18 B	0.025	0.00074	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-31	0.24		0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-32	0.060	B	0.012	0.00058	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-33	0.12	C21 B	0.025	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-34	ND		0.012	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-35	0.0051	J	0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-36	ND		0.012	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-37	0.066		0.012	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-38	ND		0.012	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-39	ND		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-40	0.30	C B	0.037	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-41	0.30	C40 B	0.037	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-42	0.15		0.012	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-43	0.021	J C	0.025	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-44	0.58	C B	0.037	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-45	0.10	C B	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-46	0.032		0.012	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-47	0.58	C44 B	0.037	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-48	0.097		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-49	0.34	C	0.025	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1

Lab Sample ID: 580-77396-5

Date Collected: 05/17/18 14:40

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.083	C	0.025	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-51	0.10	C45 B	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-52	0.70	B	0.012	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-53	0.083	C50	0.025	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-54	0.0037	J q	0.012	0.000067	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-55	0.013	q	0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-56	0.23		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-57	ND		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-58	ND		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-59	0.048	C	0.037	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-60	0.11		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-61	0.76	C B	0.050	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-62	0.048	C59	0.037	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-63	0.020		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-64	0.23		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-65	0.58	C44 B	0.037	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-66	0.50	B	0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-67	0.012	q	0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-68	0.0044	J B	0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-69	0.34	C49	0.025	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-70	0.76	C61 B	0.050	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-71	0.30	C40 B	0.037	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-72	0.0056	J	0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-73	0.021	J C43	0.025	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-74	0.76	C61 B	0.050	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-75	0.048	C59	0.037	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-76	0.76	C61 B	0.050	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-77	0.045		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-78	ND		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-79	0.0034	J q	0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-80	ND		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-81	0.0018	J	0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-82	0.098		0.012	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-83	0.41	C	0.025	0.00028	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-84	0.17		0.012	0.00031	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-85	0.13	C	0.037	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-86	0.42	C	0.074	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-87	0.42	C86	0.074	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-88	0.10	C	0.025	0.00026	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-89	0.013		0.012	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-90	0.55	C B	0.037	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-91	0.10	C88	0.025	0.00026	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-92	0.11		0.012	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-93	0.014	J q C	0.025	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-94	0.0047	J q	0.012	0.00029	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-95	0.46		0.012	0.00028	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-96	0.0071	J q	0.012	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-97	0.42	C86	0.074	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-98	0.030	C	0.025	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1

Lab Sample ID: 580-77396-5

Date Collected: 05/17/18 14:40

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.41	C83	0.025	0.00028	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-100	0.014	J q C93	0.025	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-101	0.55	C90 B	0.037	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-102	0.030	C98	0.025	0.00027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-103	0.0074	J q	0.012	0.00025	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-104	ND		0.012	0.00019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-105	0.23		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-106	ND		0.012	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-107	0.042		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-108	0.021	J C	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-109	0.42	C86	0.074	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-110	0.64	C B	0.025	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-111	ND		0.012	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-112	ND		0.012	0.00019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-113	0.55	C90 B	0.037	0.00023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-114	0.014		0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-115	0.64	C110 B	0.025	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-116	0.13	C85	0.037	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-117	0.13	C85	0.037	0.00021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-118	0.50	B	0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-119	0.42	C86	0.074	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-120	ND		0.012	0.00017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-121	ND		0.012	0.00018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-122	ND		0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-123	0.012		0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-124	0.021	J C108	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-125	0.42	C86	0.074	0.00022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-126	ND		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-127	ND		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-128	0.11	C	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-129	0.70	C B	0.050	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-130	0.042	q	0.012	0.0027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-131	0.0056	J q	0.012	0.0028	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-132	0.22		0.012	0.0027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-133	0.014		0.012	0.0026	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-134	0.043	C	0.025	0.0027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-135	0.24	C	0.025	0.00060	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-136	0.077		0.012	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-137	0.028	q	0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-138	0.70	C129 B	0.050	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-139	0.0092	J q C	0.025	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-140	0.0092	J q C139	0.025	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-141	0.14	B	0.012	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-142	0.0027	J q	0.012	0.0026	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-143	0.043	C134	0.025	0.0027	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-144	0.030		0.012	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-145	ND		0.012	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-146	0.11		0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-147	0.54	C	0.025	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1

Lab Sample ID: 580-77396-5

Date Collected: 05/17/18 14:40

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.012	0.00058	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-149	0.54	C147	0.025	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-150	ND		0.012	0.00039	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-151	0.24	C135	0.025	0.00060	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-152	0.0013	J	0.012	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-153	0.59	C B	0.025	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-154	0.012		0.012	0.00050	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-155	ND		0.012	0.00039	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-156	0.073	C	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-157	0.073	C156	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-158	0.070		0.012	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-159	0.0080	J q	0.012	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-160	0.70	C129 B	0.050	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-161	ND		0.012	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-162	0.0029	J	0.012	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-163	0.70	C129 B	0.050	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-164	0.049		0.012	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-165	ND		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-166	0.11	C128	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-167	0.027		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-168	0.59	C153 B	0.025	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-169	ND		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-170	0.24	B	0.012	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-171	0.080	C	0.025	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-172	0.043		0.012	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-173	0.080	C171	0.025	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-174	0.26	B	0.012	0.00055	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-175	0.0099	J q	0.012	0.00049	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-176	0.028		0.012	0.00034	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-177	0.15	B	0.012	0.00055	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-178	0.047		0.012	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-179	0.097	B	0.012	0.00038	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-180	0.48	C B	0.025	0.00040	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-181	0.049		0.012	0.00047	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-182	ND		0.012	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-183	0.16	C	0.025	0.00045	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-184	ND		0.012	0.00038	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-185	0.16	C183	0.025	0.00045	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-186	ND		0.012	0.00037	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-187	0.30	B	0.012	0.00046	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-188	ND		0.012	0.00034	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-189	0.0079	J q	0.012	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-190	0.049		0.012	0.00035	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-191	0.011	J	0.012	0.00035	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-192	ND		0.012	0.00037	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-193	0.48	C180 B	0.025	0.00040	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-194	0.13	B	0.012	0.0028	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-195	0.078		0.012	0.0031	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-196	0.064		0.012	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1

Lab Sample ID: 580-77396-5

Date Collected: 05/17/18 14:40

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.6

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0078	J	0.012	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-198	0.17	C	0.025	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-199	0.17	C198	0.025	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-200	0.024		0.012	0.00077	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-201	0.018	q	0.012	0.00074	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-202	0.032		0.012	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-203	0.11		0.012	0.00095	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-204	0.0020	J q	0.012	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-205	0.010	J q	0.012	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-206	0.16	B	0.012	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-207	0.037		0.012	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-208	0.043	q	0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1
PCB-209	0.22		0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 17:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	62		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-3L	61		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-4L	79		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-15L	84		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-19L	83		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-37L	85		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-54L	82		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-77L	87		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-81L	84		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-104L	92		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-105L	84		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-114L	84		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-118L	87		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-123L	87		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-126L	86		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-155L	100		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-156L	84	C	30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-157L	84	C156	30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-167L	83		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-169L	84		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-170L	82		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-188L	84		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-189L	93		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-202L	93		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-205L	78		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-206L	77		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-208L	76		30 - 140	05/31/18 11:15	06/12/18 17:20	1
PCB-209L	71		30 - 140	05/31/18 11:15	06/12/18 17:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	77		40 - 125	05/31/18 11:15	06/12/18 17:20	1
PCB-111L	89		40 - 125	05/31/18 11:15	06/12/18 17:20	1
PCB-178L	84		40 - 125	05/31/18 11:15	06/12/18 17:20	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1-D

Lab Sample ID: 580-77396-6

Date Collected: 05/17/18 14:42

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0065	J	0.012	0.00031	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-2	0.0083	J	0.012	0.00033	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-3	0.0073	J	0.012	0.00036	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-4	0.028		0.025	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-5	ND		0.012	0.00071	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-6	0.016	B	0.012	0.00070	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-7	0.0025	J	0.012	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-8	0.034	q	0.025	0.00068	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-9	ND		0.012	0.00078	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-10	ND		0.012	0.00075	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-11	0.090	B	0.025	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-12	0.010	J q C	0.025	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-13	0.010	J q C12	0.025	0.00064	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-14	ND		0.012	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-15	0.031	q	0.012	0.00069	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-16	0.037	B	0.012	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-17	0.047		0.012	0.00058	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-18	0.085	C B	0.025	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-19	0.023		0.012	0.00071	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-20	0.23	C B	0.025	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-21	0.067	C B	0.025	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-22	0.057		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-23	ND		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-24	0.0013	J	0.012	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-25	0.029		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-26	0.039	C	0.025	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-27	0.0092	J	0.012	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-28	0.23	C20 B	0.025	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-29	0.039	C26	0.025	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-30	0.085	C18 B	0.025	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-31	0.16		0.025	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-32	0.037	B	0.012	0.00040	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-33	0.067	C21 B	0.025	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-34	ND		0.012	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-35	0.0057	J	0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-36	ND		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-37	0.051		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-38	ND		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-39	ND		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-40	0.20	C B	0.037	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-41	0.20	C40 B	0.037	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-42	0.11		0.012	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-43	0.014	J C	0.025	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-44	0.40	C B	0.037	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-45	0.069	C B	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-46	0.019	q	0.012	0.0026	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-47	0.40	C44 B	0.037	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-48	0.062		0.012	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-49	0.24	C	0.025	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1-D

Lab Sample ID: 580-77396-6

Date Collected: 05/17/18 14:42

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.055	C	0.025	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-51	0.069	C45 B	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-52	0.48	B	0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-53	0.055	C50	0.025	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-54	0.0022	J q	0.012	0.000056	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-55	0.0080	J q	0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-56	0.18		0.012	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-57	ND		0.012	0.0015	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-58	ND		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-59	0.029	J q C	0.037	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-60	0.077		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-61	0.55	C B	0.050	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-62	0.029	J q C59	0.037	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-63	0.014	q	0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-64	0.16		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-65	0.40	C44 B	0.037	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-66	0.40	B	0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-67	0.0074	J q	0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-68	0.0048	J B	0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-69	0.24	C49	0.025	0.0017	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-70	0.55	C61 B	0.050	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-71	0.20	C40 B	0.037	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-72	0.0040	J q	0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-73	0.014	J C43	0.025	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-74	0.55	C61 B	0.050	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-75	0.029	J q C59	0.037	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-76	0.55	C61 B	0.050	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-77	0.038		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-78	ND		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-79	0.0040	J q	0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-80	ND		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-81	ND		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-82	0.072		0.012	0.00057	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-83	0.32	C	0.025	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-84	0.13		0.012	0.00059	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-85	0.10	C	0.037	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-86	0.31	C	0.075	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-87	0.31	C86	0.075	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-88	0.083	C	0.025	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-89	0.0082	J	0.012	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-90	0.44	C B	0.037	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-91	0.083	C88	0.025	0.00051	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-92	0.093		0.012	0.00053	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-93	0.017	J C	0.025	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-94	0.0035	J q	0.012	0.00056	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-95	0.35		0.012	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-96	0.0059	J	0.012	0.00042	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-97	0.31	C86	0.075	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-98	0.020	J C	0.025	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1-D

Lab Sample ID: 580-77396-6

Date Collected: 05/17/18 14:42

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.32	C83	0.025	0.00054	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-100	0.017	J C93	0.025	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-101	0.44	C90 B	0.037	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-102	0.020	J C98	0.025	0.00052	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-103	0.0076	J	0.012	0.00048	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-104	ND		0.012	0.00037	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-105	0.20		0.012	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-106	ND		0.012	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-107	0.037		0.012	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-108	0.018	J C	0.025	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-109	0.31	C86	0.075	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-110	0.50	C B	0.025	0.00036	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-111	ND		0.012	0.00033	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-112	0.0028	J	0.012	0.00037	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-113	0.44	C90 B	0.037	0.00044	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-114	0.013		0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-115	0.50	C110 B	0.025	0.00036	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-116	0.10	C85	0.037	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-117	0.10	C85	0.037	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-118	0.43	B	0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-119	0.31	C86	0.075	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-120	0.0019	J q	0.012	0.00033	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-121	ND		0.012	0.00036	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-122	0.0088	J	0.012	0.0027	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-123	0.0098	J q	0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-124	0.018	J C108	0.025	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-125	0.31	C86	0.075	0.00043	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-126	ND		0.012	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-127	ND		0.012	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-128	0.098	C	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-129	0.61	C B	0.050	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-130	0.041		0.012	0.0030	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-131	0.0064	J q	0.012	0.0031	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-132	0.19		0.012	0.0029	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-133	0.0096	J	0.012	0.0028	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-134	0.026	q C	0.025	0.0030	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-135	0.21	C	0.025	0.00049	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-136	0.069		0.012	0.00035	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-137	0.025	q	0.012	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-138	0.61	C129 B	0.050	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-139	0.011	J C	0.025	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-140	0.011	J C139	0.025	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-141	0.12	B	0.012	0.0026	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-142	ND		0.012	0.0029	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-143	0.026	q C134	0.025	0.0030	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-144	0.025		0.012	0.00046	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-145	0.0011	J q	0.012	0.00035	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-146	0.10		0.012	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-147	0.47	C	0.025	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1-D

Lab Sample ID: 580-77396-6

Date Collected: 05/17/18 14:42

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.012	0.00047	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-149	0.47	C147	0.025	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-150	ND		0.012	0.00032	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-151	0.21	C135	0.025	0.00049	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-152	ND		0.012	0.00034	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-153	0.52	C B	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-154	0.011	J	0.012	0.00041	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-155	ND		0.012	0.00032	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-156	0.065	C	0.025	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-157	0.065	C156	0.025	0.0024	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-158	0.057		0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-159	0.0072	J	0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-160	0.61	C129 B	0.050	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-161	ND		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-162	ND		0.012	0.0018	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-163	0.61	C129 B	0.050	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-164	0.040		0.012	0.0019	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-165	ND		0.012	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-166	0.098	C128	0.025	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-167	0.023		0.012	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-168	0.52	C153 B	0.025	0.0020	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-169	ND		0.012	0.0014	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-170	0.20	B	0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-171	0.071	C	0.025	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-172	0.037		0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-173	0.071	C171	0.025	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-174	0.22	B	0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-175	0.0093	J	0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-176	0.025		0.012	0.00074	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-177	0.13	B	0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-178	0.039		0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-179	0.081	B	0.012	0.00082	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-180	0.42	C B	0.025	0.00087	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-181	0.046		0.012	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-182	ND		0.012	0.00096	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-183	0.14	C	0.025	0.00098	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-184	ND		0.012	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-185	0.14	C183	0.025	0.00098	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-186	ND		0.012	0.00079	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-187	0.25	B	0.012	0.0010	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-188	ND		0.012	0.00075	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-189	0.0093	J	0.012	0.00096	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-190	0.045		0.012	0.00075	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-191	0.0092	J q	0.012	0.00076	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-192	ND		0.012	0.00081	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-193	0.42	C180 B	0.025	0.00087	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-194	0.14	B	0.012	0.0022	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-195	0.078		0.012	0.0025	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-196	0.062		0.012	0.0012	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1-D

Lab Sample ID: 580-77396-6

Date Collected: 05/17/18 14:42

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.2

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0051	J q	0.012	0.00083	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-198	0.14	C	0.025	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-199	0.14	C198	0.025	0.0013	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-200	0.019		0.012	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-201	0.016		0.012	0.00088	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-202	0.026		0.012	0.00099	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-203	0.11		0.012	0.0011	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-204	0.0018	J	0.012	0.00091	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-205	0.0094	J q	0.012	0.0016	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-206	0.18	q B	0.012	0.0031	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-207	0.025		0.012	0.0021	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-208	0.039		0.012	0.0023	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
PCB-209	0.18		0.012	0.00066	ng/g	☼	05/31/18 11:15	06/12/18 18:24	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	61		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-3L	63		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-4L	78		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-15L	85		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-19L	81		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-37L	89		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-54L	87		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-77L	87		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-81L	86		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-104L	99		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-105L	85		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-114L	85		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-118L	86		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-123L	87		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-126L	88		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-155L	106		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-156L	85	C	30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-157L	85	C156	30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-167L	84		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-169L	83		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-170L	85		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-188L	85		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-189L	94		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-202L	94		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-205L	79		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-206L	78		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-208L	77		30 - 140				05/31/18 11:15	06/12/18 18:24	1
PCB-209L	74		30 - 140				05/31/18 11:15	06/12/18 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	79		40 - 125				05/31/18 11:15	06/12/18 18:24	1
PCB-111L	93		40 - 125				05/31/18 11:15	06/12/18 18:24	1
PCB-178L	83		40 - 125				05/31/18 11:15	06/12/18 18:24	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20751/11-A

Matrix: Water

Analysis Batch: 21060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20751

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.040	0.00029	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-2	ND		0.040	0.00034	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-3	0.00225	J	0.040	0.00039	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-4	ND		0.060	0.010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-5	ND		0.040	0.0081	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-6	ND		0.040	0.0071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-7	ND		0.040	0.0073	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-8	ND		0.060	0.0066	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-9	ND		0.040	0.0075	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-10	ND		0.040	0.0080	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-11	0.0198	J q	0.060	0.0069	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-12	ND	C	0.080	0.0072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-13	ND	C12	0.080	0.0072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-14	ND		0.040	0.0061	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-15	ND		0.040	0.0074	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-16	ND		0.040	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-17	ND		0.040	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-18	ND	C	0.080	0.00089	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-19	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-20	0.00360	J C	0.080	0.00087	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-21	ND	C	0.080	0.00085	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-22	0.00180	J q	0.040	0.00089	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-23	ND		0.040	0.00089	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-24	ND		0.040	0.00085	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-25	ND		0.040	0.00081	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-26	ND	C	0.080	0.00086	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-27	ND		0.040	0.00073	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-28	0.00360	J C20	0.080	0.00087	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-29	ND	C26	0.080	0.00086	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-30	ND	C18	0.080	0.00089	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-31	ND		0.040	0.00085	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-32	ND		0.040	0.00070	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-33	ND	C21	0.080	0.00085	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-34	ND		0.040	0.00092	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-35	ND		0.040	0.00090	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-36	ND		0.040	0.00086	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-37	ND		0.040	0.00089	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-38	ND		0.040	0.00093	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-39	ND		0.040	0.00083	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-40	ND	C	0.12	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-41	ND	C40	0.12	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-42	ND		0.040	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-43	ND	C	0.080	0.00095	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-44	0.00740	J C q	0.12	0.00090	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-45	ND	C	0.080	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-46	ND		0.040	0.0013	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-47	0.00740	J C44 q	0.12	0.00090	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-48	ND		0.040	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20751/11-A

Matrix: Water

Analysis Batch: 21060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20751

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	ND	C	0.080	0.00083	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-50	ND	C	0.080	0.00099	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-51	ND	C45	0.080	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-52	ND		0.040	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-53	ND	C50	0.080	0.00099	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-54	ND		0.040	0.00017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-55	ND		0.040	0.00074	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-56	ND		0.040	0.00074	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-57	ND		0.040	0.00075	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-58	ND		0.040	0.00076	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-59	ND	C	0.12	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-60	ND		0.040	0.00075	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-61	ND	C	0.16	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-62	ND	C59	0.12	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-63	ND		0.040	0.00069	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-64	ND		0.040	0.00068	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-65	0.00740	J C44 q	0.12	0.00090	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-66	ND		0.040	0.00070	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-67	ND		0.040	0.00065	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-68	0.00351	J q	0.040	0.00067	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-69	ND	C49	0.080	0.00083	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-70	ND	C61	0.16	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-71	ND	C40	0.12	0.0010	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-72	ND		0.040	0.00074	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-73	ND	C43	0.080	0.00095	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-74	ND	C61	0.16	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-75	ND	C59	0.12	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-76	ND	C61	0.16	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-77	ND		0.040	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-78	ND		0.040	0.00076	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-79	ND		0.040	0.00066	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-80	ND		0.040	0.00065	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-81	ND		0.040	0.00069	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-82	ND		0.040	0.00096	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-83	ND	C	0.080	0.00088	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-84	ND		0.040	0.00098	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-85	ND	C	0.12	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-86	ND	C	0.24	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-87	ND	C86	0.24	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-88	ND	C	0.080	0.00087	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-89	ND		0.040	0.00095	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-90	0.00351	J C q	0.12	0.00073	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-91	ND	C88	0.080	0.00087	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-92	ND		0.040	0.00083	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-93	ND	C	0.080	0.00084	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-94	ND		0.040	0.00094	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-95	ND		0.040	0.00091	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-96	ND		0.040	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20751/11-A

Matrix: Water

Analysis Batch: 21060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20751

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	ND	C86	0.24	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-98	ND	C	0.080	0.00081	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-99	ND	C83	0.080	0.00088	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-100	ND	C93	0.080	0.00084	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-101	0.00351	J C90 q	0.12	0.00073	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-102	ND	C98	0.080	0.00081	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-103	ND		0.040	0.00084	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-104	ND		0.040	0.00063	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-105	0.00245	J	0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-106	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-107	ND		0.040	0.0013	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-108	ND	C	0.080	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-109	ND	C86	0.24	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-110	ND	C	0.080	0.00061	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-111	ND		0.040	0.00059	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-112	ND		0.040	0.00062	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-113	0.00351	J C90 q	0.12	0.00073	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-114	ND		0.040	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-115	ND	C110	0.080	0.00061	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-116	ND	C85	0.12	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-117	ND	C85	0.12	0.00071	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-118	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-119	ND	C86	0.24	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-120	ND		0.040	0.00060	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-121	ND		0.040	0.00061	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-122	ND		0.040	0.0014	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-123	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-124	ND	C108	0.080	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-125	ND	C86	0.24	0.00072	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-126	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-127	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-128	ND	C	0.080	0.0021	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-129	ND	C	0.16	0.0021	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-130	ND		0.040	0.0028	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-131	ND		0.040	0.0029	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-132	ND		0.040	0.0027	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-133	ND		0.040	0.0027	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-134	ND	C	0.080	0.0028	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-135	ND	C	0.080	0.00048	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-136	ND		0.040	0.00034	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-137	ND		0.040	0.0024	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-138	ND	C129	0.16	0.0021	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-139	ND	C	0.080	0.0024	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-140	ND	C139	0.080	0.0024	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-141	ND		0.040	0.0025	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-142	ND		0.040	0.0026	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-143	ND	C134	0.080	0.0028	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-144	ND		0.040	0.00043	ng/L		05/30/18 13:51	06/10/18 15:19	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20751/11-A

Matrix: Water

Analysis Batch: 21060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20751

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.040	0.00033	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-146	ND		0.040	0.0023	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-147	ND	C	0.080	0.0027	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-148	ND		0.040	0.00046	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-149	ND	C147	0.080	0.0027	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-150	ND		0.040	0.00031	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-151	ND	C135	0.080	0.00048	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-152	ND		0.040	0.00034	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-153	ND	C	0.080	0.0019	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-154	ND		0.040	0.00037	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-155	ND		0.040	0.00031	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-156	ND	C	0.080	0.0022	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-157	ND	C156	0.080	0.0022	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-158	ND		0.040	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-159	ND		0.040	0.0018	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-160	ND	C129	0.16	0.0021	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-161	ND		0.040	0.0018	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-162	ND		0.040	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-163	ND	C129	0.16	0.0021	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-164	ND		0.040	0.0019	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-165	ND		0.040	0.0020	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-166	ND	C128	0.080	0.0021	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-167	ND		0.040	0.0014	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-168	ND	C153	0.080	0.0019	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-169	ND		0.040	0.0013	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-170	ND		0.040	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-171	ND	C	0.080	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-172	ND		0.040	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-173	ND	C171	0.080	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-174	ND		0.040	0.0016	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-175	ND		0.040	0.0015	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-176	ND		0.040	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-177	ND		0.040	0.0016	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-178	ND		0.040	0.0016	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-179	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-180	ND	C	0.080	0.0013	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-181	ND		0.040	0.0015	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-182	ND		0.040	0.0015	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-183	ND	C	0.080	0.0015	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-184	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-185	ND	C183	0.080	0.0015	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-186	ND		0.040	0.0012	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-187	ND		0.040	0.0014	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-188	ND		0.040	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-189	ND		0.040	0.0015	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-190	ND		0.040	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-191	ND		0.040	0.0011	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-192	ND		0.040	0.0013	ng/L		05/30/18 13:51	06/10/18 15:19	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20751/11-A

Matrix: Water

Analysis Batch: 21060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20751

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	ND	C180	0.080	0.0013	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-194	ND		0.040	0.0022	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-195	ND		0.040	0.0025	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-196	ND		0.040	0.00081	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-197	ND		0.040	0.00062	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-198	0.00214	J C q	0.080	0.00082	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-199	0.00214	J C198 q	0.080	0.00082	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-200	ND		0.040	0.00055	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-201	ND		0.040	0.00056	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-202	ND		0.040	0.00063	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-203	ND		0.040	0.00073	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-204	ND		0.040	0.00062	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-205	ND		0.040	0.0019	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-206	ND		0.040	0.0025	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-207	ND		0.040	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-208	ND		0.040	0.0017	ng/L		05/30/18 13:51	06/10/18 15:19	1
PCB-209	0.00104	J q	0.040	0.00023	ng/L		05/30/18 13:51	06/10/18 15:19	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	85		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-3L	81		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-4L	79		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-15L	89		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-19L	91		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-37L	97		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-54L	88		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-77L	104		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-81L	103		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-104L	72		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-105L	98		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-114L	97		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-118L	96		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-123L	96		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-126L	110		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-155L	80		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-156L	108	C	30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-157L	108	C156	30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-167L	105		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-169L	113		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-170L	95		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-188L	91		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-189L	105		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-202L	107		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-205L	87		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-206L	88		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-208L	91		30 - 140	05/30/18 13:51	06/10/18 15:19	1
PCB-209L	82		30 - 140	05/30/18 13:51	06/10/18 15:19	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20751/11-A

Matrix: Water

Analysis Batch: 21060

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20751

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	108		40 - 125	05/30/18 13:51	06/10/18 15:19	1
PCB-111L	105		40 - 125	05/30/18 13:51	06/10/18 15:19	1
PCB-178L	101		40 - 125	05/30/18 13:51	06/10/18 15:19	1

Lab Sample ID: LCS 140-20751/12-A

Matrix: Water

Analysis Batch: 21114

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	1.00	0.915		ng/L		92	50 - 150
PCB-3	1.00	1.01		ng/L		101	50 - 150
PCB-4	1.00	1.09		ng/L		109	50 - 150
PCB-15	1.00	1.16		ng/L		116	50 - 150
PCB-19	1.00	1.20		ng/L		120	50 - 150
PCB-37	1.00	1.10		ng/L		110	50 - 150
PCB-54	1.00	1.06		ng/L		106	50 - 150
PCB-77	1.00	1.08		ng/L		108	50 - 150
PCB-81	1.00	1.01		ng/L		101	50 - 150
PCB-104	1.00	1.16		ng/L		116	50 - 150
PCB-105	1.00	1.07		ng/L		107	50 - 150
PCB-114	1.00	1.14		ng/L		114	50 - 150
PCB-118	1.00	1.07		ng/L		107	50 - 150
PCB-123	1.00	1.17		ng/L		117	50 - 150
PCB-126	1.00	1.09		ng/L		109	50 - 150
PCB-155	1.00	1.09		ng/L		109	50 - 150
PCB-156	2.00	2.15	C	ng/L		107	50 - 150
PCB-157	2.00	2.15	C156	ng/L		107	50 - 150
PCB-167	1.00	1.07		ng/L		107	50 - 150
PCB-169	1.00	0.998		ng/L		100	50 - 150
PCB-188	1.00	1.02		ng/L		102	50 - 150
PCB-189	1.00	1.01		ng/L		101	50 - 150
PCB-202	1.00	0.919		ng/L		92	50 - 150
PCB-205	1.00	1.16		ng/L		116	50 - 150
PCB-206	1.00	0.975		ng/L		98	50 - 150
PCB-208	1.00	1.02		ng/L		102	50 - 150
PCB-209	1.00	1.06		ng/L		106	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	72		30 - 140
PCB-3L	69		30 - 140
PCB-4L	79		30 - 140
PCB-15L	91		30 - 140
PCB-19L	84		30 - 140
PCB-37L	94		30 - 140
PCB-54L	91		30 - 140
PCB-77L	91		30 - 140
PCB-81L	92		30 - 140
PCB-104L	75		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: LCS 140-20751/12-A

Matrix: Water

Analysis Batch: 21114

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20751

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-105L	91		30 - 140
PCB-114L	91		30 - 140
PCB-118L	93		30 - 140
PCB-123L	89		30 - 140
PCB-126L	93		30 - 140
PCB-155L	86		30 - 140
PCB-156L	106	C	30 - 140
PCB-157L	106	C156	30 - 140
PCB-167L	112		30 - 140
PCB-169L	114		30 - 140
PCB-170L	88		30 - 140
PCB-188L	85		30 - 140
PCB-189L	86		30 - 140
PCB-202L	112		30 - 140
PCB-205L	81		30 - 140
PCB-206L	83		30 - 140
PCB-208L	85		30 - 140
PCB-209L	82		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	104		40 - 125
PCB-111L	101		40 - 125
PCB-178L	94		40 - 125

Lab Sample ID: MB 140-20769/17-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20769

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.010	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-2	ND		0.010	0.00013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-3	ND		0.010	0.00018	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-4	ND		0.020	0.00016	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-5	ND		0.010	0.00014	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-6	0.000497	J q	0.010	0.00014	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-7	ND		0.010	0.00013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-8	ND		0.020	0.00014	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-9	ND		0.010	0.00015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-10	ND		0.010	0.00015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-11	0.00401	J	0.020	0.00013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-12	ND	C	0.020	0.00013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-13	ND	C12	0.020	0.00013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-14	ND		0.010	0.00012	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-15	ND		0.010	0.00017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-16	0.000590	J q	0.010	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-17	ND		0.010	0.000055	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-18	0.000513	J C q	0.020	0.000048	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-19	ND		0.010	0.000067	ng/g		05/31/18 11:15	06/12/18 04:12	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20769/17-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20769

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-20	0.000503	J C q	0.020	0.00035	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-21	0.000381	J C q	0.020	0.00032	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-22	ND		0.010	0.00035	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-23	ND		0.010	0.00035	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-24	ND		0.010	0.000041	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-25	ND		0.010	0.00033	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-26	ND	C	0.020	0.00034	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-27	ND		0.010	0.000041	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-28	0.000503	J C20 q	0.020	0.00035	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-29	ND	C26	0.020	0.00034	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-30	0.000513	J C18 q	0.020	0.000048	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-31	ND		0.020	0.00032	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-32	0.000330	J q	0.010	0.000038	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-33	0.000381	J C21 q	0.020	0.00032	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-34	ND		0.010	0.00036	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-35	ND		0.010	0.00034	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-36	ND		0.010	0.00031	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-37	ND		0.010	0.00032	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-38	ND		0.010	0.00034	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-39	ND		0.010	0.00031	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-40	0.000427	J C	0.030	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-41	0.000427	J C40	0.030	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-42	ND		0.010	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-43	ND	C	0.020	0.000095	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-44	0.00426	J C	0.030	0.000095	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-45	0.000526	J C q	0.020	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-46	ND		0.010	0.00013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-47	0.00426	J C44	0.030	0.000095	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-48	ND		0.010	0.00010	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-49	ND	C	0.020	0.000085	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-50	ND	C	0.020	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-51	0.000526	J C45 q	0.020	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-52	0.000794	J	0.010	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-53	ND	C50	0.020	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-54	ND		0.010	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-55	ND		0.010	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-56	ND		0.010	0.000073	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-57	ND		0.010	0.000074	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-58	ND		0.010	0.000071	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-59	ND	C	0.030	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-60	ND		0.010	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-61	0.000586	J C	0.040	0.000070	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-62	ND	C59	0.030	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-63	ND		0.010	0.000064	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-64	ND		0.010	0.000067	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-65	0.00426	J C44	0.030	0.000095	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-66	0.000468	J q	0.010	0.000070	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-67	ND		0.010	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20769/17-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20769

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-68	0.000759	J	0.010	0.000064	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-69	ND	C49	0.020	0.000085	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-70	0.000586	J C61	0.040	0.000070	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-71	0.000427	J C40	0.030	0.00011	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-72	ND		0.010	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-73	ND	C43	0.020	0.000095	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-74	0.000586	J C61	0.040	0.000070	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-75	ND	C59	0.030	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-76	0.000586	J C61	0.040	0.000070	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-77	ND		0.010	0.000069	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-78	ND		0.010	0.000071	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-79	ND		0.010	0.000061	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-80	ND		0.010	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-81	ND		0.010	0.000064	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-82	ND		0.010	0.000074	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-83	ND	C	0.020	0.000071	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-84	ND		0.010	0.000077	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-85	ND	C	0.030	0.000053	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-86	ND	C	0.060	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-87	ND	C86	0.060	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-88	ND	C	0.020	0.000067	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-89	ND		0.010	0.000072	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-90	0.000163	J C q	0.030	0.000057	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-91	ND	C88	0.020	0.000067	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-92	ND		0.010	0.000069	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-93	ND	C	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-94	ND		0.010	0.000073	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-95	ND		0.010	0.000071	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-96	ND		0.010	0.000054	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-97	ND	C86	0.060	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-98	ND	C	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-99	ND	C83	0.020	0.000071	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-100	ND	C93	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-101	0.000163	J C90 q	0.030	0.000057	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-102	ND	C98	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-103	ND		0.010	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-104	ND		0.010	0.000049	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-105	ND		0.010	0.00017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-106	ND		0.010	0.00017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-107	ND		0.010	0.00017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-108	ND	C	0.020	0.00018	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-109	ND	C86	0.060	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-110	0.000764	J C	0.020	0.000047	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-111	ND		0.010	0.000044	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-112	ND		0.010	0.000048	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-113	0.000163	J C90 q	0.030	0.000057	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-114	ND		0.010	0.00015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-115	0.000764	J C110	0.020	0.000047	ng/g		05/31/18 11:15	06/12/18 04:12	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20769/17-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20769

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-116	ND	C85	0.030	0.000053	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-117	ND	C85	0.030	0.000053	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-118	0.000299	J q	0.010	0.00016	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-119	ND	C86	0.060	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-120	ND		0.010	0.000043	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-121	0.000147	J q	0.010	0.000047	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-122	ND		0.010	0.00019	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-123	ND		0.010	0.00015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-124	ND	C108	0.020	0.00018	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-125	ND	C86	0.060	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-126	ND		0.010	0.00018	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-127	ND		0.010	0.00017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-128	ND	C	0.020	0.000059	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-129	0.000425	J C q	0.040	0.000060	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-130	ND		0.010	0.000081	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-131	ND		0.010	0.000081	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-132	ND		0.010	0.000078	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-133	ND		0.010	0.000076	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-134	ND	C	0.020	0.000079	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-135	ND	C	0.020	0.000089	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-136	ND		0.010	0.000064	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-137	ND		0.010	0.000065	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-138	0.000425	J C129 q	0.040	0.000060	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-139	ND	C	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-140	ND	C139	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-141	0.000208	J q	0.010	0.000070	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-142	ND		0.010	0.000077	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-143	ND	C134	0.020	0.000079	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-144	ND		0.010	0.000083	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-145	ND		0.010	0.000064	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-146	ND		0.010	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-147	ND	C	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-148	ND		0.010	0.000086	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-149	ND	C147	0.020	0.000068	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-150	ND		0.010	0.000058	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-151	ND	C135	0.020	0.000089	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-152	ND		0.010	0.000062	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-153	0.000408	J C q	0.020	0.000053	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-154	ND		0.010	0.000075	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-155	ND		0.010	0.000059	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-156	ND	C	0.020	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-157	ND	C156	0.020	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-158	ND		0.010	0.000047	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-159	ND		0.010	0.000048	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-160	0.000425	J C129 q	0.040	0.000060	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-161	ND		0.010	0.000050	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-162	ND		0.010	0.000047	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-163	0.000425	J C129 q	0.040	0.000060	ng/g		05/31/18 11:15	06/12/18 04:12	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: MB 140-20769/17-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20769

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-164	ND		0.010	0.000051	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-165	ND		0.010	0.000057	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-166	ND	C128	0.020	0.000059	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-167	ND		0.010	0.000035	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-168	0.000408	J C153 q	0.020	0.000053	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-169	ND		0.010	0.000038	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-170	0.000243	J q	0.010	0.000020	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-171	ND	C	0.020	0.000020	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-172	ND		0.010	0.000020	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-173	ND	C171	0.020	0.000020	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-174	0.000132	J q	0.010	0.000021	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-175	ND		0.010	0.000019	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-176	ND		0.010	0.000013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-177	0.000195	J q	0.010	0.000021	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-178	ND		0.010	0.000019	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-179	0.0000410	J q	0.010	0.000014	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-180	0.000489	J C q	0.020	0.000015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-181	ND		0.010	0.000018	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-182	ND		0.010	0.000017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-183	ND	C	0.020	0.000017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-184	ND		0.010	0.000015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-185	ND	C183	0.020	0.000017	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-186	ND		0.010	0.000014	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-187	0.000201	J q	0.010	0.000018	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-188	ND		0.010	0.000013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-189	ND		0.010	0.000038	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-190	ND		0.010	0.000013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-191	ND		0.010	0.000013	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-192	ND		0.010	0.000014	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-193	0.000489	J C180 q	0.020	0.000015	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-194	0.0000662	J q	0.010	0.000037	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-195	ND		0.010	0.000042	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-196	ND		0.010	0.000060	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-197	ND		0.010	0.000041	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-198	ND	C	0.020	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-199	ND	C198	0.020	0.000063	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-200	ND		0.010	0.000045	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-201	ND		0.010	0.000044	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-202	ND		0.010	0.000049	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-203	ND		0.010	0.000056	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-204	ND		0.010	0.000045	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-205	ND		0.010	0.000028	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-206	0.000543	J q	0.010	0.000065	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-207	ND		0.010	0.000043	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-208	ND		0.010	0.000046	ng/g		05/31/18 11:15	06/12/18 04:12	1
PCB-209	ND		0.010	0.000030	ng/g		05/31/18 11:15	06/12/18 04:12	1

TestAmerica Seattle

QC Sample Results

Client: AECOM

TestAmerica Job ID: 580-77396-3

Project/Site: Portland Harbor Pre-Remedial Design

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
PCB-1L	74		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-3L	71		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-4L	76		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-15L	71		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-19L	75		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-37L	74		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-54L	87		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-77L	77		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-81L	77		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-104L	86		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-105L	82		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-114L	81		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-118L	85		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-123L	81		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-126L	82		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-155L	89		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-156L	82	C	30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-157L	82	C156	30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-167L	83		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-169L	82		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-170L	81		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-188L	80		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-189L	85		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-202L	88		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-205L	76		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-206L	71		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-208L	69		30 - 140	05/31/18 11:15	06/12/18 04:12	1
PCB-209L	65		30 - 140	05/31/18 11:15	06/12/18 04:12	1

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
PCB-28L	78		40 - 125	05/31/18 11:15	06/12/18 04:12	1
PCB-111L	82		40 - 125	05/31/18 11:15	06/12/18 04:12	1
PCB-178L	79		40 - 125	05/31/18 11:15	06/12/18 04:12	1

Lab Sample ID: LCS 140-20769/18-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20769

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>
PCB-1	0.500	0.559		ng/g		112	50 - 150
PCB-3	0.500	0.579		ng/g		116	50 - 150
PCB-4	0.500	0.452		ng/g		90	50 - 150
PCB-15	0.500	0.543		ng/g		109	50 - 150
PCB-19	0.500	0.465		ng/g		93	50 - 150
PCB-37	0.500	0.499		ng/g		100	50 - 150
PCB-54	0.500	0.519		ng/g		104	50 - 150
PCB-77	0.500	0.472		ng/g		94	50 - 150
PCB-81	0.500	0.505		ng/g		101	50 - 150
PCB-104	0.500	0.454		ng/g		91	50 - 150
PCB-105	0.500	0.497		ng/g		99	50 - 150
PCB-114	0.500	0.516		ng/g		103	50 - 150
PCB-118	0.500	0.514		ng/g		103	50 - 150
PCB-123	0.500	0.485		ng/g		97	50 - 150
PCB-126	0.500	0.502		ng/g		100	50 - 150

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: LCS 140-20769/18-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20769

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-155	0.500	0.484		ng/g		97	50 - 150
PCB-156	1.00	0.989	C	ng/g		99	50 - 150
PCB-157	1.00	0.989	C156	ng/g		99	50 - 150
PCB-167	0.500	0.526		ng/g		105	50 - 150
PCB-169	0.500	0.471		ng/g		94	50 - 150
PCB-188	0.500	0.475		ng/g		95	50 - 150
PCB-189	0.500	0.494		ng/g		99	50 - 150
PCB-202	0.500	0.445		ng/g		89	50 - 150
PCB-205	0.500	0.481		ng/g		96	50 - 150
PCB-206	0.500	0.476		ng/g		95	50 - 150
PCB-208	0.500	0.473		ng/g		95	50 - 150
PCB-209	0.500	0.461		ng/g		92	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	78		30 - 140
PCB-3L	72		30 - 140
PCB-4L	83		30 - 140
PCB-15L	75		30 - 140
PCB-19L	80		30 - 140
PCB-37L	75		30 - 140
PCB-54L	85		30 - 140
PCB-77L	80		30 - 140
PCB-81L	78		30 - 140
PCB-104L	86		30 - 140
PCB-105L	79		30 - 140
PCB-114L	79		30 - 140
PCB-118L	82		30 - 140
PCB-123L	80		30 - 140
PCB-126L	83		30 - 140
PCB-155L	87		30 - 140
PCB-156L	81	C	30 - 140
PCB-157L	81	C156	30 - 140
PCB-167L	79		30 - 140
PCB-169L	86		30 - 140
PCB-170L	81		30 - 140
PCB-188L	77		30 - 140
PCB-189L	83		30 - 140
PCB-202L	87		30 - 140
PCB-205L	76		30 - 140
PCB-206L	71		30 - 140
PCB-208L	69		30 - 140
PCB-209L	66		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	74		40 - 125
PCB-111L	81		40 - 125
PCB-178L	79		40 - 125

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: LCSD 140-20769/19-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20769

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1	0.500	0.570		ng/g		114	50 - 150	2	50
PCB-3	0.500	0.581		ng/g		116	50 - 150	0	50
PCB-4	0.500	0.477		ng/g		95	50 - 150	5	50
PCB-15	0.500	0.531		ng/g		106	50 - 150	2	50
PCB-19	0.500	0.455		ng/g		91	50 - 150	2	50
PCB-37	0.500	0.501		ng/g		100	50 - 150	0	50
PCB-54	0.500	0.502		ng/g		100	50 - 150	3	50
PCB-77	0.500	0.471		ng/g		94	50 - 150	0	50
PCB-81	0.500	0.473		ng/g		95	50 - 150	7	50
PCB-104	0.500	0.466		ng/g		93	50 - 150	3	50
PCB-105	0.500	0.503		ng/g		101	50 - 150	1	50
PCB-114	0.500	0.535		ng/g		107	50 - 150	4	50
PCB-118	0.500	0.523		ng/g		105	50 - 150	2	50
PCB-123	0.500	0.474		ng/g		95	50 - 150	2	50
PCB-126	0.500	0.497		ng/g		99	50 - 150	1	50
PCB-155	0.500	0.477		ng/g		95	50 - 150	1	50
PCB-156	1.00	0.974	C	ng/g		97	50 - 150	2	50
PCB-157	1.00	0.974	C156	ng/g		97	50 - 150	2	50
PCB-167	0.500	0.530		ng/g		106	50 - 150	1	50
PCB-169	0.500	0.495		ng/g		99	50 - 150	5	50
PCB-188	0.500	0.479		ng/g		96	50 - 150	1	50
PCB-189	0.500	0.491		ng/g		98	50 - 150	1	50
PCB-202	0.500	0.442		ng/g		88	50 - 150	1	50
PCB-205	0.500	0.479		ng/g		96	50 - 150	0	50
PCB-206	0.500	0.488		ng/g		98	50 - 150	2	50
PCB-208	0.500	0.491		ng/g		98	50 - 150	4	50
PCB-209	0.500	0.455		ng/g		91	50 - 150	1	50

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
PCB-1L	75		30 - 140
PCB-3L	70		30 - 140
PCB-4L	78		30 - 140
PCB-15L	69		30 - 140
PCB-19L	75		30 - 140
PCB-37L	74		30 - 140
PCB-54L	80		30 - 140
PCB-77L	79		30 - 140
PCB-81L	77		30 - 140
PCB-104L	83		30 - 140
PCB-105L	80		30 - 140
PCB-114L	78		30 - 140
PCB-118L	82		30 - 140
PCB-123L	81		30 - 140
PCB-126L	82		30 - 140
PCB-155L	87		30 - 140
PCB-156L	82	C	30 - 140
PCB-157L	82	C156	30 - 140
PCB-167L	79		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77396-3

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

Lab Sample ID: LCSD 140-20769/19-B

Matrix: Solid

Analysis Batch: 21113

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20769

<i>Isotope Dilution</i>	<i>LCSD</i>	<i>LCSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
PCB-169L	82		30 - 140
PCB-170L	78		30 - 140
PCB-188L	76		30 - 140
PCB-189L	84		30 - 140
PCB-202L	85		30 - 140
PCB-205L	76		30 - 140
PCB-206L	70		30 - 140
PCB-208L	67		30 - 140
PCB-209L	64		30 - 140

<i>Surrogate</i>	<i>LCSD</i>	<i>LCSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
PCB-28L	75		40 - 125
PCB-111L	81		40 - 125
PCB-178L	79		40 - 125

Lab Chronicle

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B137-BL1

Date Collected: 05/16/18 15:50

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-1

Matrix: Solid

Percent Solids: 57.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20769	05/31/18 11:15	CLI	TAL KNX
Total/NA	Cleanup	Split			20852	06/04/18 09:37	ALS	TAL KNX
Total/NA	Analysis	1668A		1	21113	06/12/18 08:27	LKM	TAL KNX

Client Sample ID: PDI-SG-B028-BL1

Date Collected: 05/16/18 13:00

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-2

Matrix: Solid

Percent Solids: 38.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20769	05/31/18 11:15	CLI	TAL KNX
Total/NA	Cleanup	Split			20852	06/04/18 09:37	ALS	TAL KNX
Total/NA	Analysis	1668A		1	21133	06/12/18 15:13	MSD	TAL KNX

Client Sample ID: PDI-RB-VV-180517

Date Collected: 05/17/18 17:15

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sepf			20751	05/30/18 13:51	SMA	TAL KNX
Total/NA	Analysis	1668A		1	21060	06/10/18 20:27	JMN	TAL KNX

Client Sample ID: PDI-SG-B209-BL1

Date Collected: 05/17/18 12:12

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-4

Matrix: Solid

Percent Solids: 72.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20769	05/31/18 11:15	CLI	TAL KNX
Total/NA	Cleanup	Split			20852	06/04/18 09:37	ALS	TAL KNX
Total/NA	Analysis	1668A		1	21133	06/12/18 16:17	MSD	TAL KNX

Client Sample ID: PDI-SG-B225-BL1

Date Collected: 05/17/18 14:40

Date Received: 05/18/18 13:10

Lab Sample ID: 580-77396-5

Matrix: Solid

Percent Solids: 39.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20769	05/31/18 11:15	CLI	TAL KNX
Total/NA	Cleanup	Split			20852	06/04/18 09:37	ALS	TAL KNX
Total/NA	Analysis	1668A		1	21133	06/12/18 17:20	MSD	TAL KNX

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-77396-3

Client Sample ID: PDI-SG-B225-BL1-D

Lab Sample ID: 580-77396-6

Date Collected: 05/17/18 14:42

Matrix: Solid

Date Received: 05/18/18 13:10

Percent Solids: 39.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20769	05/31/18 11:15	CLI	TAL KNX
Total/NA	Cleanup	Split			20852	06/04/18 09:37	ALS	TAL KNX
Total/NA	Analysis	1668A		1	21133	06/12/18 18:24	MSD	TAL KNX

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM

TestAmerica Job ID: 580-77396-3

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

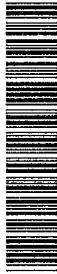
TestAmerica Job ID: 580-77396-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-77396-1	PDI-SG-B137-BL1	Solid	05/16/18 15:50	05/18/18 13:10
580-77396-2	PDI-SG-B028-BL1	Solid	05/16/18 13:00	05/18/18 13:10
580-77396-3	PDI-RB-VV-180517	Water	05/17/18 17:15	05/18/18 13:10
580-77396-4	PDI-SG-B209-BL1	Solid	05/17/18 12:12	05/18/18 13:10
580-77396-5	PDI-SG-B225-BL1	Solid	05/17/18 14:40	05/18/18 13:10
580-77396-6	PDI-SG-B225-BL1-D	Solid	05/17/18 14:42	05/18/18 13:10



10
11
12

11
12



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

[illegible]

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			☐ Containers, Broken	
2. Were ambient air containers received intact?			/	☐ Checked in lab	
3. The coolers/containers custody seal if present, is it intact? /	/			☐ Yes ☐ NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>5468</u> Correction factor: <u>0.0</u>	/			☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			☐ Containers, Broken	
6. Were samples received in appropriate containers?	/			☐ Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received	
8. Were all of the samples listed on the COC received?	/			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			☐ COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/		/	☐ Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			☐ COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			☐ COC No tests on COC	
13. Is the matrix of the samples noted?	/			☐ COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			☐ Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace?			/	☐ Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/			☐ Residual Chlorine	
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info	
Project #: <u>1914 2650/04</u> PM Instructions: _____					

QA026R30.doc, 080916

Date: 5-22-18

Sample Receiving Associate: Danphurman

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-77396-3

Login Number: 77396

List Source: TestAmerica Seattle

List Number: 1

Creator: O'Connell, Jason I

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

Isotope Dilution Summary

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

TestAmerica Job ID: 580-77396-3

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)
580-77396-1	PDI-SG-B137-BL1	57	62	75	83	79	86	78	90
580-77396-2	PDI-SG-B028-BL1	61	63	75	85	80	85	80	84
580-77396-4	PDI-SG-B209-BL1	59	61	71	82	72	83	78	86
580-77396-5	PDI-SG-B225-BL1	62	61	79	84	83	85	82	87
580-77396-6	PDI-SG-B225-BL1-D	61	63	78	85	81	89	87	87
LCS 140-20769/18-B	Lab Control Sample	78	72	83	75	80	75	85	80
LCSD 140-20769/19-B	Lab Control Sample Dup	75	70	78	69	75	74	80	79
MB 140-20769/17-B	Method Blank	74	71	76	71	75	74	87	77

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)
580-77396-1	PDI-SG-B137-BL1	86	82	85	85	85	87	87	93
580-77396-2	PDI-SG-B028-BL1	82	88	83	81	85	85	83	96
580-77396-4	PDI-SG-B209-BL1	86	85	84	83	86	85	86	95
580-77396-5	PDI-SG-B225-BL1	84	92	84	84	87	87	86	100
580-77396-6	PDI-SG-B225-BL1-D	86	99	85	85	86	87	88	106
LCS 140-20769/18-B	Lab Control Sample	78	86	79	79	82	80	83	87
LCSD 140-20769/19-B	Lab Control Sample Dup	77	83	80	78	82	81	82	87
MB 140-20769/17-B	Method Blank	77	86	82	81	85	81	82	89

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)
580-77396-1	PDI-SG-B137-BL1	86 C	86 C156	85	79	82	80	90	92
580-77396-2	PDI-SG-B028-BL1	82 C	82 C156	81	80	83	83	93	92
580-77396-4	PDI-SG-B209-BL1	85 C	85 C156	83	82	81	85	92	92
580-77396-5	PDI-SG-B225-BL1	84 C	84 C156	83	84	82	84	93	93
580-77396-6	PDI-SG-B225-BL1-D	85 C	85 C156	84	83	85	85	94	94
LCS 140-20769/18-B	Lab Control Sample	81 C	81 C156	79	86	81	77	83	87
LCSD 140-20769/19-B	Lab Control Sample Dup	82 C	82 C156	79	82	78	76	84	85
MB 140-20769/17-B	Method Blank	82 C	82 C156	83	82	81	80	85	88

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-77396-1	PDI-SG-B137-BL1	78	76	76	71
580-77396-2	PDI-SG-B028-BL1	75	75	74	68
580-77396-4	PDI-SG-B209-BL1	77	72	73	67
580-77396-5	PDI-SG-B225-BL1	78	77	76	71
580-77396-6	PDI-SG-B225-BL1-D	79	78	77	74
LCS 140-20769/18-B	Lab Control Sample	76	71	69	66
LCSD 140-20769/19-B	Lab Control Sample Dup	76	70	67	64
MB 140-20769/17-B	Method Blank	76	71	69	65

Surrogate Legend

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

TestAmerica Seattle

Isotope Dilution Summary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77396-3

PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L
PCB208L = PCB-208L
PCB209L = PCB-209L

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

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)
580-77396-3	PDI-RB-VV-180517	87	86	83	78	84	90	86	89
LCS 140-20751/12-A	Lab Control Sample	72	69	79	91	84	94	91	91
MB 140-20751/11-A	Method Blank	85	81	79	89	91	97	88	104

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)
580-77396-3	PDI-RB-VV-180517	86	80	92	90	91	87	90	84
LCS 140-20751/12-A	Lab Control Sample	92	75	91	91	93	89	93	86
MB 140-20751/11-A	Method Blank	103	72	98	97	96	96	110	80

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)
580-77396-3	PDI-RB-VV-180517	100 C	100 C156	90	98	79	84	89	93
LCS 140-20751/12-A	Lab Control Sample	106 C	106 C156	112	114	88	85	86	112
MB 140-20751/11-A	Method Blank	108 C	108 C156	105	113	95	91	105	107

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-77396-3	PDI-RB-VV-180517	76	83	78	78
LCS 140-20751/12-A	Lab Control Sample	81	83	85	82
MB 140-20751/11-A	Method Blank	87	88	91	82

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L

TestAmerica Seattle

Isotope Dilution Summary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77396-3

PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L
PCB189L = PCB-189L
PCB202L = PCB-202L
PCB205L = PCB-205L
PCB206L = PCB-206L
PCB208L = PCB-208L
PCB209L = PCB-209L

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