

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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TestAmerica Job ID: 580-77301-3

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

For:

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Authorized for release by:
7/26/2018 3:55:29 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: 580-77301-3

Job ID: 580-77301-3

Laboratory: TestAmerica Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Portland Harbor Pre-Remedial Design

Report Number: 580-77301-3

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

Eleven samples were received on 5/15/2018 1:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.3° C, 2.1° C and 2.7° 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-S158 (580-77301-1), PDI-SG-S161 (580-77301-2), PDI-SG-S250 (580-77301-3), PDI-SG-S249 (580-77301-4), PDI-SG-S248 (580-77301-5), PDI-SG-S247 (580-77301-6), PDI-SG-S246 (580-77301-7), PDI-SG-S252 (580-77301-8), PDI-SG-S244 (580-77301-9) and PDI-SG-S227 (580-77301-10) were analyzed for polychlorinated biphenyls congeners (PCBs) in accordance with EPA Method 1668A. The samples were prepared on 05/24/2018 and 05/29/2018 and analyzed on 06/08/2018.

Several analytes were detected in method blank MB 140-20611/17-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.

Several analytes were detected in method blank MB 140-20706/16-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Case Narrative

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

TestAmerica Job ID: 580-77301-3

Job ID: 580-77301-3 (Continued)

Laboratory: TestAmerica Seattle (Continued)

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

PCB CONGENERS - Rinse Blank

Sample PDI-RB-VV-180514 (580-77301-11) was analyzed for PCB Congeners in accordance with 1668A. The sample was prepared on 05/30/2018 and analyzed on 06/10/2018.

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.

An Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: PDI-RB-VV-180514 (580-77301-11). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

An Ion abundance ratio is outside criteria for one of the Isotope Dilution Analytes (IDA) associated with the following sample: PDI-RB-VV-180514 (580-77301-11). The theoretical area for the IDA was used to quantitate recovery and target concentration.

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: 580-77301-3

Qualifiers

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
C93	The compound co-eluted with PCB-93
B	Compound was found in the blank and sample.
C90	The compound co-eluted with PCB-90
C98	The compound co-eluted with PCB-98
C	The compound co-eluted with other compounds
C86	The compound co-eluted with PCB-86
C110	The compound co-eluted with PCB-110
C85	The compound co-eluted with PCB-85
C108	The compound co-eluted with PCB-108
C12	The compound co-eluted with PCB-12
C129	The compound co-eluted with PCB-129
C139	The compound co-eluted with PCB-139
C134	The compound co-eluted with PCB-134
C147	The compound co-eluted with PCB-147
C135	The compound co-eluted with PCB-135
C156	The compound co-eluted with PCB-156
C128	The compound co-eluted with PCB-128
C153	The compound co-eluted with PCB-153
C171	The compound co-eluted with PCB-171
C183	The compound co-eluted with PCB-183
C180	The compound co-eluted with PCB-180
C198	The compound co-eluted with PCB-198
*	Isotope Dilution analyte is outside acceptance limits.
C20	The compound co-eluted with PCB-20
C26	The compound co-eluted with PCB-26
C18	The compound co-eluted with PCB-18
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
I	Value is EMPC (estimated maximum possible concentration).
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

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)

TestAmerica Seattle

Definitions/Glossary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77301-3

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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
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: 580-77301-3

Client Sample ID: PDI-SG-S158

Date Collected: 05/14/18 13:15

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-1

Matrix: Solid

Percent Solids: 57.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.016		0.0096	0.00082	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-2	0.012		0.0096	0.00083	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-3	0.012	q	0.0096	0.00082	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-4	0.059		0.019	0.0033	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-5	0.0033	J q	0.0096	0.0024	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-6	0.054		0.0096	0.0021	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-7	0.0092	J q	0.0096	0.0021	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-8	0.20		0.019	0.0019	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-9	0.012		0.0096	0.0022	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-10	0.0037	J q	0.0096	0.0023	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-11	0.036		0.019	0.0020	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-12	0.024	C	0.019	0.0021	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-13	0.024	C12	0.019	0.0021	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-14	ND		0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-15	0.10		0.0096	0.0021	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-16	0.24		0.0096	0.00055	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-17	0.39		0.0096	0.00049	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-18	0.65	C	0.019	0.00043	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-19	0.053		0.0096	0.00060	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-20	0.98	C B	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-21	0.39	C B	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-22	0.23		0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-23	ND		0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-24	0.0076	J	0.0096	0.00042	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-25	0.076		0.0096	0.0016	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-26	0.13	C	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-27	0.040		0.0096	0.00036	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-28	0.98	B C20	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-29	0.13	C26	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-30	0.65	C18	0.019	0.00043	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-31	0.76	B	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-32	0.095		0.0096	0.00034	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-33	0.39	B C21	0.019	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-34	0.011		0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-35	0.0084	J	0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-36	ND		0.0096	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-37	0.20		0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-38	ND		0.0096	0.0018	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-39	0.010		0.0096	0.0017	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-40	0.54	C	0.029	0.0043	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-41	0.54	C40	0.029	0.0043	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-42	0.30		0.0096	0.0043	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-43	0.034	C	0.019	0.0040	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-44	1.1	C B	0.029	0.0038	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-45	0.18	C	0.019	0.0045	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-46	0.059		0.0096	0.0055	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-47	1.1	B C44	0.029	0.0038	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-48	0.21		0.0096	0.0043	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1
PCB-49	0.87	C	0.019	0.0035	ng/g	☆	05/24/18 12:00	06/08/18 02:45	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S158

Lab Sample ID: 580-77301-1

Date Collected: 05/14/18 13:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 57.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.13	C	0.019	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-51	0.18	C45	0.019	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-52	1.4		0.0096	0.0043	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-53	0.13	C50	0.019	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-54	0.0017	J q	0.0096	0.000027	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-55	0.013		0.0096	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-56	0.47		0.0096	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-57	0.0053	J q	0.0096	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-58	0.011		0.0096	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-59	0.093	C	0.029	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-60	0.087		0.0096	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-61	1.9	C B	0.038	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-62	0.093	C59	0.029	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-63	0.040		0.0096	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-64	0.44		0.0096	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-65	1.1	B C44	0.029	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-66	1.2		0.0096	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-67	0.023	q	0.0096	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-68	0.017	B q	0.0096	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-69	0.87	C49	0.019	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-70	1.9	C61 B	0.038	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-71	0.54	C40	0.029	0.0043	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-72	0.031		0.0096	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-73	0.034	C43	0.019	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-74	1.9	C61 B	0.038	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-75	0.093	C59	0.029	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-76	1.9	C61 B	0.038	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-77	0.079		0.0096	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-78	ND		0.0096	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-79	0.020		0.0096	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-80	ND		0.0096	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-81	ND		0.0096	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-82	0.17		0.0096	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-83	1.1	C	0.019	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-84	0.41		0.0096	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-85	0.24	C	0.029	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-86	0.90	C	0.058	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-87	0.90	C86	0.058	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-88	0.28	C	0.019	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-89	0.017		0.0096	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-90	1.8	C B	0.029	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-91	0.28	C88	0.019	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-92	0.35		0.0096	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-93	0.030	C q	0.019	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-94	ND		0.0096	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-95	1.4		0.0096	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-96	0.015		0.0096	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-97	0.90	C86	0.058	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-98	0.063	C	0.019	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S158

Lab Sample ID: 580-77301-1

Date Collected: 05/14/18 13:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 57.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	1.1	C83	0.019	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-100	0.030	C93 q	0.019	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-101	1.8	B C90	0.029	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-102	0.063	C98	0.019	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-103	0.041		0.0096	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-104	ND		0.0096	0.00025	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-105	0.32		0.0096	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-106	ND		0.0096	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-107	0.14		0.0096	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-108	0.036	C	0.019	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-109	0.90	C86	0.058	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-110	1.8	C	0.019	0.00024	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-111	ND		0.0096	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-112	ND		0.0096	0.00025	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-113	1.8	B C90	0.029	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-114	0.021		0.0096	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-115	1.8	C110	0.019	0.00024	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-116	0.24	C85	0.029	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-117	0.24	C85	0.029	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-118	1.2	B	0.0096	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-119	0.90	C86	0.058	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-120	0.013	q	0.0096	0.00024	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-121	ND		0.0096	0.00024	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-122	0.015	q	0.0096	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-123	0.014		0.0096	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-124	0.036	C108	0.019	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-125	0.90	C86	0.058	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-126	0.0038	J q	0.0096	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-127	ND		0.0096	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-128	0.25	C	0.019	0.0039	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-129	2.0	C	0.038	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-130	0.13		0.0096	0.0054	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-131	0.016	q	0.0096	0.0056	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-132	0.61		0.0096	0.0052	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-133	0.049		0.0096	0.0051	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-134	0.10	C	0.019	0.0053	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-135	0.84	C	0.019	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-136	0.30		0.0096	0.00016	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-137	0.056		0.0096	0.0046	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-138	2.0	C129	0.038	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-139	0.033	C	0.019	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-140	0.033	C139	0.019	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-141	0.36		0.0096	0.0047	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-142	ND		0.0096	0.0051	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-143	0.10	C134	0.019	0.0053	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-144	0.072		0.0096	0.00020	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-145	ND		0.0096	0.00015	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-146	0.46		0.0096	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-147	2.2	C B	0.019	0.0051	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S158

Lab Sample ID: 580-77301-1

Date Collected: 05/14/18 13:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 57.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.010	q	0.0096	0.00021	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-149	2.2	B C147	0.019	0.0051	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-150	0.0073	J q	0.0096	0.00015	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-151	0.84	C135	0.019	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-152	ND		0.0096	0.00016	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-153	2.0	C	0.019	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-154	0.059		0.0096	0.00017	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-155	ND		0.0096	0.00015	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-156	0.17	C B	0.019	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-157	0.17	C156 B	0.019	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-158	0.15		0.0096	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-159	0.023		0.0096	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-160	2.0	C129	0.038	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-161	ND		0.0096	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-162	0.0050	J	0.0096	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-163	2.0	C129	0.038	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-164	0.14		0.0096	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-165	ND		0.0096	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-166	0.25	C128	0.019	0.0039	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-167	0.051	q	0.0096	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-168	2.0	C153	0.019	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-169	ND		0.0096	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-170	0.71		0.0096	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-171	0.22	C	0.019	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-172	0.13		0.0096	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-173	0.22	C171	0.019	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-174	0.76		0.0096	0.00034	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-175	0.030		0.0096	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-176	0.10		0.0096	0.00025	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-177	0.45	B	0.0096	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-178	0.17		0.0096	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-179	0.35	B	0.0096	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-180	1.7	C	0.019	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-181	ND		0.0096	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-182	ND		0.0096	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-183	0.54	C	0.019	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-184	ND		0.0096	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-185	0.54	C183	0.019	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-186	ND		0.0096	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-187	1.0		0.0096	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-188	ND		0.0096	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-189	0.019		0.0096	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-190	0.13		0.0096	0.00024	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-191	0.027		0.0096	0.00025	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-192	ND		0.0096	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-193	1.7	C180	0.019	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-194	0.40		0.0096	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-195	0.16		0.0096	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-196	0.19		0.0096	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S158

Lab Sample ID: 580-77301-1

Date Collected: 05/14/18 13:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 57.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.014		0.0096	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-198	0.39	C	0.019	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-199	0.39	C198	0.019	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-200	0.043		0.0096	0.00034	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-201	0.034		0.0096	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-202	0.077		0.0096	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-203	0.24		0.0096	0.00045	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-204	ND		0.0096	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-205	0.019		0.0096	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-206	0.17		0.0096	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-207	0.020		0.0096	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-208	0.047		0.0096	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1
PCB-209	0.15		0.0096	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 02:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	49		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-3L	65		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-4L	62		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-15L	80		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-19L	186	*	30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-37L	91		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-54L	213	*	30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-77L	93		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-81L	86		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-104L	84		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-105L	97		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-114L	98		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-118L	93		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-123L	92		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-126L	86		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-155L	83		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-156L	94	C	30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-157L	94	C156	30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-167L	95		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-169L	98		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-170L	85		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-188L	89		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-189L	99		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-202L	94		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-205L	77		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-206L	77		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-208L	81		30 - 140	05/24/18 12:00	06/08/18 02:45	1
PCB-209L	74		30 - 140	05/24/18 12:00	06/08/18 02:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	91		40 - 125	05/24/18 12:00	06/08/18 02:45	1
PCB-111L	92		40 - 125	05/24/18 12:00	06/08/18 02:45	1
PCB-178L	88		40 - 125	05/24/18 12:00	06/08/18 02:45	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S161

Date Collected: 05/14/18 16:30

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-2

Matrix: Solid

Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0041	J	0.012	0.00052	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-2	0.0093	J q	0.012	0.00057	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-3	0.0043	J q	0.012	0.00061	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-4	0.022	J	0.024	0.0059	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-5	ND		0.012	0.0042	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-6	0.010	J	0.012	0.0037	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-7	ND		0.012	0.0038	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-8	0.030		0.024	0.0034	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-9	ND		0.012	0.0039	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-10	ND		0.012	0.0042	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-11	0.069		0.024	0.0036	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-12	0.0058	J C q	0.024	0.0038	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-13	0.0058	J C12 q	0.024	0.0038	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-14	ND		0.012	0.0032	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-15	0.026		0.012	0.0036	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-16	0.024		0.012	0.00062	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-17	0.038		0.012	0.00055	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-18	0.069	C	0.024	0.00049	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-19	0.017	q	0.012	0.00068	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-20	0.14	C B	0.024	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-21	0.058	C B	0.024	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-22	0.035		0.012	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-23	ND		0.012	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-24	ND		0.012	0.00047	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-25	0.012		0.012	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-26	0.020	J C	0.024	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-27	0.0072	J q	0.012	0.00040	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-28	0.14	B C20	0.024	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-29	0.020	J C26	0.024	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-30	0.069	C18	0.024	0.00049	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-31	0.10	B	0.024	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-32	0.025		0.012	0.00039	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-33	0.058	B C21	0.024	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-34	ND		0.012	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-35	ND		0.012	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-36	ND		0.012	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-37	0.040		0.012	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-38	ND		0.012	0.0012	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-39	ND		0.012	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-40	0.071	C	0.036	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-41	0.071	C40	0.036	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-42	0.032	q	0.012	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-43	0.0055	J C	0.024	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-44	0.18	C B	0.036	0.0026	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-45	0.029	C	0.024	0.0031	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-46	0.0061	J q	0.012	0.0038	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-47	0.18	B C44	0.036	0.0026	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-48	0.023		0.012	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1
PCB-49	0.12	C	0.024	0.0024	ng/g	☆	05/24/18 12:00	06/08/18 03:46	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S161

Lab Sample ID: 580-77301-2

Date Collected: 05/14/18 16:30

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.025	C	0.024	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-51	0.029	C45	0.024	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-52	0.21		0.012	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-53	0.025	C50	0.024	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-54	0.0027	J	0.012	0.000038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-55	ND		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-56	0.070		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-57	ND		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-58	ND		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-59	0.0098	J C q	0.036	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-60	0.025		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-61	0.30	C B	0.048	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-62	0.0098	J C59 q	0.036	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-63	0.0066	J	0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-64	0.062		0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-65	0.18	B C44	0.036	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-66	0.18		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-67	0.0027	J q	0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-68	0.0037	J B q	0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-69	0.12	C49	0.024	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-70	0.30	C61 B	0.048	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-71	0.071	C40	0.036	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-72	0.0043	J	0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-73	0.0055	J C43	0.024	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-74	0.30	C61 B	0.048	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-75	0.0098	J C59 q	0.036	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-76	0.30	C61 B	0.048	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-77	0.019		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-78	ND		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-79	0.0042	J q	0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-80	ND		0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-81	ND		0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-82	0.039	q	0.012	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-83	0.26	C	0.024	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-84	0.083		0.012	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-85	0.067	C	0.036	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-86	0.23	C	0.072	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-87	0.23	C86	0.072	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-88	0.064	C	0.024	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-89	0.0046	J	0.012	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-90	0.41	C B	0.036	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-91	0.064	C88	0.024	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-92	0.081		0.012	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-93	0.010	J C q	0.024	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-94	ND		0.012	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-95	0.29		0.012	0.00048	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-96	0.0037	J	0.012	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-97	0.23	C86	0.072	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-98	0.012	J C q	0.024	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S161

Lab Sample ID: 580-77301-2

Date Collected: 05/14/18 16:30

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.26	C83	0.024	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-100	0.010	J C93 q	0.024	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-101	0.41	B C90	0.036	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-102	0.012	J C98 q	0.024	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-103	0.0075	J q	0.012	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-104	ND		0.012	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-105	0.12		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-106	ND		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-107	0.030		0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-108	0.010	J C q	0.024	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-109	0.23	C86	0.072	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-110	0.46	C	0.024	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-111	ND		0.012	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-112	ND		0.012	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-113	0.41	B C90	0.036	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-114	0.0062	J q	0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-115	0.46	C110	0.024	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-116	0.067	C85	0.036	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-117	0.067	C85	0.036	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-118	0.30	B	0.012	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-119	0.23	C86	0.072	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-120	0.0032	J q	0.012	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-121	ND		0.012	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-122	0.0038	J q	0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-123	0.0049	J q	0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-124	0.010	J q C108	0.024	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-125	0.23	C86	0.072	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-126	0.0025	J q	0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-127	ND		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-128	0.078	C	0.024	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-129	0.63	C	0.048	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-130	0.031	q	0.012	0.0047	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-131	0.0086	J	0.012	0.0049	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-132	0.18		0.012	0.0046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-133	0.012		0.012	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-134	0.030	C	0.024	0.0047	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-135	0.23	C	0.024	0.00070	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-136	0.072		0.012	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-137	0.019		0.012	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-138	0.63	C129	0.048	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-139	0.0094	J C q	0.024	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-140	0.0094	J C139 q	0.024	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-141	0.11		0.012	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-142	ND		0.012	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-143	0.030	C134	0.024	0.0047	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-144	0.022		0.012	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-145	ND		0.012	0.00048	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-146	0.12		0.012	0.0039	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-147	0.58	C B	0.024	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S161

Lab Sample ID: 580-77301-2

Date Collected: 05/14/18 16:30

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0033	J	0.012	0.00067	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-149	0.58	B C147	0.024	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-150	0.0017	J q	0.012	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-151	0.23	C135	0.024	0.00070	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-152	ND		0.012	0.00049	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-153	0.55	C	0.024	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-154	0.014	q	0.012	0.00054	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-155	ND		0.012	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-156	0.057	C B	0.024	0.0039	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-157	0.057	C156 B	0.024	0.0039	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-158	0.051		0.012	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-159	0.0066	J	0.012	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-160	0.63	C129	0.048	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-161	ND		0.012	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-162	ND		0.012	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-163	0.63	C129	0.048	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-164	0.041		0.012	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-165	ND		0.012	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-166	0.078	C128	0.024	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-167	0.019		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-168	0.55	C153	0.024	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-169	ND		0.012	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-170	0.20		0.012	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-171	0.053	C	0.024	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-172	0.033		0.012	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-173	0.053	C171	0.024	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-174	0.19		0.012	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-175	0.0081	J q	0.012	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-176	0.024		0.012	0.00086	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-177	0.12	B	0.012	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-178	0.045		0.012	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-179	0.091	B	0.012	0.00091	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-180	0.40	C	0.024	0.00095	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-181	ND		0.012	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-182	ND		0.012	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-183	0.13	C	0.024	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-184	ND		0.012	0.00093	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-185	0.13	C183	0.024	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-186	ND		0.012	0.00090	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-187	0.26		0.012	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-188	ND		0.012	0.00079	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-189	0.0049	J	0.012	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-190	0.034		0.012	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-191	0.0084	J	0.012	0.00086	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-192	ND		0.012	0.00096	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-193	0.40	C180	0.024	0.00095	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-194	0.10		0.012	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-195	0.044		0.012	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-196	0.045		0.012	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S161

Date Collected: 05/14/18 16:30

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-2

Matrix: Solid

Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0041	J	0.012	0.00080	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-198	0.12	C	0.024	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-199	0.12	C198	0.024	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-200	0.012		0.012	0.00071	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-201	0.015		0.012	0.00073	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-202	0.026		0.012	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-203	0.062		0.012	0.00095	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-204	ND		0.012	0.00080	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-205	0.0065	J	0.012	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-206	0.076		0.012	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-207	0.0079	J	0.012	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-208	0.023		0.012	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1
PCB-209	0.090		0.012	0.00055	ng/g	☼	05/24/18 12:00	06/08/18 03:46	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	60		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-3L	69		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-4L	62		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-15L	79		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-19L	79		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-37L	91		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-54L	85		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-77L	93		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-81L	93		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-104L	75		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-105L	90		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-114L	89		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-118L	89		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-123L	88		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-126L	86		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-155L	80		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-156L	85	C	30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-157L	85	C156	30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-167L	87		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-169L	87		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-170L	83		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-188L	97		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-189L	100		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-202L	98		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-205L	76		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-206L	71		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-208L	83		30 - 140	05/24/18 12:00	06/08/18 03:46	1
PCB-209L	63		30 - 140	05/24/18 12:00	06/08/18 03:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	90		40 - 125	05/24/18 12:00	06/08/18 03:46	1
PCB-111L	93		40 - 125	05/24/18 12:00	06/08/18 03:46	1
PCB-178L	94		40 - 125	05/24/18 12:00	06/08/18 03:46	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S250

Date Collected: 05/14/18 10:40

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-3

Matrix: Solid

Percent Solids: 38.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0045	J	0.013	0.00041	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-2	0.0033	J q	0.013	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-3	0.0037	J q	0.013	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-4	0.0089	J q	0.026	0.0055	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-5	ND		0.013	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-6	0.0079	J	0.013	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-7	ND		0.013	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-8	0.026		0.026	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-9	ND		0.013	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-10	ND		0.013	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-11	0.058		0.026	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-12	ND	C	0.026	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-13	ND	C12	0.026	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-14	ND		0.013	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-15	0.020	q	0.013	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-16	0.017		0.013	0.00059	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-17	0.021	q	0.013	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-18	0.036	C	0.026	0.00047	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-19	0.0071	J	0.013	0.00065	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-20	0.074	C B	0.026	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-21	0.030	C B	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-22	0.023		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-23	ND		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-24	ND		0.013	0.00045	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-25	0.0079	J	0.013	0.00098	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-26	0.012	J C	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-27	0.0050	J	0.013	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-28	0.074	C20 B	0.026	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-29	0.012	J C26	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-30	0.036	C18	0.026	0.00047	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-31	0.056	B	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-32	0.015		0.013	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-33	0.030	C21 B	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-34	ND		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-35	0.0026	J	0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-36	ND		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-37	0.023		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-38	ND		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-39	ND		0.013	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-40	0.035	J C	0.039	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-41	0.035	J C40	0.039	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-42	0.017	q	0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-43	ND	C	0.026	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-44	0.11	C B	0.039	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-45	0.021	J C	0.026	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-46	ND		0.013	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-47	0.11	C44 B	0.039	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-48	0.0097	J q	0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-49	0.069	C	0.026	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S250

Lab Sample ID: 580-77301-3

Date Collected: 05/14/18 10:40

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 38.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.015	J C	0.026	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-51	0.021	J C45	0.026	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-52	0.16		0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-53	0.015	J C50	0.026	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-54	ND		0.013	0.000043	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-55	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-56	0.034		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-57	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-58	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-59	0.0045	J q C	0.039	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-60	0.013		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-61	0.18	C B	0.052	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-62	0.0045	J q C59	0.039	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-63	ND		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-64	0.035		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-65	0.11	C44 B	0.039	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-66	0.095		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-67	ND		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-68	0.0027	J q B	0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-69	0.069	C49	0.026	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-70	0.18	C61 B	0.052	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-71	0.035	J C40	0.039	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-72	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-73	ND	C43	0.026	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-74	0.18	C61 B	0.052	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-75	0.0045	J q C59	0.039	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-76	0.18	C61 B	0.052	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-77	0.012	J	0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-78	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-79	ND		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-80	ND		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-81	ND		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-82	0.039		0.013	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-83	0.22	C	0.026	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-84	0.076		0.013	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-85	0.058	C	0.039	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-86	0.22	C	0.078	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-87	0.22	C86	0.078	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-88	0.051	C	0.026	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-89	ND		0.013	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-90	0.40	C B	0.039	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-91	0.051	C88	0.026	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-92	0.081		0.013	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-93	0.0079	J q C	0.026	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-94	ND		0.013	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-95	0.29		0.013	0.00034	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-96	ND		0.013	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-97	0.22	C86	0.078	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-98	0.011	J C	0.026	0.00030	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S250

Lab Sample ID: 580-77301-3

Date Collected: 05/14/18 10:40

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 38.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.22	C83	0.026	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-100	0.0079	J q C93	0.026	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-101	0.40	C90 B	0.039	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-102	0.011	J C98	0.026	0.00030	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-103	0.0077	J q	0.013	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-104	ND		0.013	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-105	0.11		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-106	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-107	0.029		0.013	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-108	0.0096	J q C	0.026	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-109	0.22	C86	0.078	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-110	0.42	C	0.026	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-111	ND		0.013	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-112	ND		0.013	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-113	0.40	C90 B	0.039	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-114	0.0052	J q	0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-115	0.42	C110	0.026	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-116	0.058	C85	0.039	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-117	0.058	C85	0.039	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-118	0.27	B	0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-119	0.22	C86	0.078	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-120	0.0027	J q	0.013	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-121	ND		0.013	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-122	0.0044	J	0.013	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-123	0.0044	J q	0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-124	0.0096	J q C108	0.026	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-125	0.22	C86	0.078	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-126	ND		0.013	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-127	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-128	0.079	C	0.026	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-129	0.64	C	0.052	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-130	0.031	q	0.013	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-131	ND		0.013	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-132	0.19		0.013	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-133	0.016		0.013	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-134	0.026	q C	0.026	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-135	0.23	C	0.026	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-136	0.074		0.013	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-137	0.016	q	0.013	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-138	0.64	C129	0.052	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-139	0.0088	J q C	0.026	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-140	0.0088	J q C139	0.026	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-141	0.12		0.013	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-142	ND		0.013	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-143	0.026	q C134	0.026	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-144	0.020		0.013	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-145	ND		0.013	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-146	0.13		0.013	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-147	0.56	C B	0.026	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S250

Lab Sample ID: 580-77301-3

Date Collected: 05/14/18 10:40

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 38.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0016	J q	0.013	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-149	0.56	C147 B	0.026	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-150	0.0022	J	0.013	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-151	0.23	C135	0.026	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-152	ND		0.013	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-153	0.55	C	0.026	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-154	0.013	q	0.013	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-155	ND		0.013	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-156	0.055	C B	0.026	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-157	0.055	C156 B	0.026	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-158	0.055		0.013	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-159	0.0069	J q	0.013	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-160	0.64	C129	0.052	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-161	ND		0.013	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-162	0.0022	J q	0.013	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-163	0.64	C129	0.052	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-164	0.047		0.013	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-165	ND		0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-166	0.079	C128	0.026	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-167	0.019		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-168	0.55	C153	0.026	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-169	ND		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-170	0.20		0.013	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-171	0.065	C	0.026	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-172	0.035		0.013	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-173	0.065	C171	0.026	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-174	0.20		0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-175	0.0089	J	0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-176	0.025		0.013	0.00091	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-177	0.12	B	0.013	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-178	0.048		0.013	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-179	0.092	B	0.013	0.00096	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-180	0.43	C	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-181	ND		0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-182	ND		0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-183	0.13	C	0.026	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-184	ND		0.013	0.00098	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-185	0.13	C183	0.026	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-186	ND		0.013	0.00095	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-187	0.28		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-188	ND		0.013	0.00083	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-189	0.0037	J q	0.013	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-190	0.037		0.013	0.00087	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-191	0.0065	J q	0.013	0.00090	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-192	ND		0.013	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-193	0.43	C180	0.026	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-194	0.11		0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-195	0.043		0.013	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-196	0.044		0.013	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S250

Lab Sample ID: 580-77301-3

Date Collected: 05/14/18 10:40

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 38.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0032	J	0.013	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-198	0.11	C	0.026	0.00083	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-199	0.11	C198	0.026	0.00083	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-200	0.0097	J q	0.013	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-201	0.013		0.013	0.00057	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-202	0.023		0.013	0.00064	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-203	0.064		0.013	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-204	ND		0.013	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-205	0.0057	J	0.013	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-206	0.047		0.013	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-207	0.0049	J	0.013	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-208	0.014		0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1
PCB-209	0.050		0.013	0.00052	ng/g	☼	05/24/18 12:00	06/08/18 04:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	64		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-3L	70		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-4L	64		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-15L	79		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-19L	74		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-37L	88		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-54L	83		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-77L	91		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-81L	91		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-104L	76		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-105L	90		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-114L	89		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-118L	88		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-123L	87		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-126L	90		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-155L	80		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-156L	87	C	30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-157L	87	C156	30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-167L	88		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-169L	89		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-170L	83		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-188L	92		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-189L	95		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-202L	95		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-205L	74		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-206L	72		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-208L	81		30 - 140	05/24/18 12:00	06/08/18 04:48	1
PCB-209L	63		30 - 140	05/24/18 12:00	06/08/18 04:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	94		40 - 125	05/24/18 12:00	06/08/18 04:48	1
PCB-111L	93		40 - 125	05/24/18 12:00	06/08/18 04:48	1
PCB-178L	94		40 - 125	05/24/18 12:00	06/08/18 04:48	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S249

Date Collected: 05/14/18 12:00

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-4

Matrix: Solid

Percent Solids: 60.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.034		0.0099	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-2	0.012	q	0.0099	0.00054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-3	0.017	q	0.0099	0.00062	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-4	0.068		0.020	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-5	ND		0.0099	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-6	0.040		0.0099	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-7	0.0083	J q	0.0099	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-8	0.18		0.020	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-9	0.012		0.0099	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-10	0.0031	J q	0.0099	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-11	0.054		0.020	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-12	0.014	J q C	0.020	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-13	0.014	J q C12	0.020	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-14	ND		0.0099	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-15	0.090		0.0099	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-16	0.10	q	0.0099	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-17	0.17		0.0099	0.00047	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-18	0.29	C	0.020	0.00042	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-19	0.032		0.0099	0.00058	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-20	0.43	C B	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-21	0.21	C B	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-22	0.13		0.0099	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-23	ND		0.0099	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-24	0.0036	J q	0.0099	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-25	0.027	q	0.0099	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-26	0.060	C	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-27	0.024		0.0099	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-28	0.43	C20 B	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-29	0.060	C26	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-30	0.29	C18	0.020	0.00042	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-31	0.32	B	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-32	0.11		0.0099	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-33	0.21	C21 B	0.020	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-34	0.0029	J	0.0099	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-35	0.0056	J	0.0099	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-36	ND		0.0099	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-37	0.11		0.0099	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-38	ND		0.0099	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-39	0.0023	J q	0.0099	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-40	0.18	C	0.030	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-41	0.18	C40	0.030	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-42	0.081		0.0099	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-43	0.011	J q C	0.020	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-44	0.47	C B	0.030	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-45	0.083	C	0.020	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-46	0.017	q	0.0099	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-47	0.47	C44 B	0.030	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-48	0.055		0.0099	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-49	0.29	C	0.020	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S249

Lab Sample ID: 580-77301-4

Date Collected: 05/14/18 12:00

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 60.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.053	C	0.020	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-51	0.083	C45	0.020	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-52	0.50		0.0099	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-53	0.053	C50	0.020	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-54	0.0021	J q	0.0099	0.000039	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-55	0.0052	J q	0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-56	0.14		0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-57	0.0021	J	0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-58	0.0026	J	0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-59	0.031	C	0.030	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-60	0.038		0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-61	0.55	C B	0.040	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-62	0.031	C59	0.030	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-63	0.011		0.0099	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-64	0.12		0.0099	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-65	0.47	C44 B	0.030	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-66	0.34		0.0099	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-67	0.0076	J q	0.0099	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-68	0.0089	J B	0.0099	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-69	0.29	C49	0.020	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-70	0.55	C61 B	0.040	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-71	0.18	C40	0.030	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-72	0.0097	J	0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-73	0.011	J q C43	0.020	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-74	0.55	C61 B	0.040	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-75	0.031	C59	0.030	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-76	0.55	C61 B	0.040	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-77	0.030	q	0.0099	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-78	ND		0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-79	0.0073	J q	0.0099	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-80	ND		0.0099	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-81	ND		0.0099	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-82	0.096		0.0099	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-83	0.80	C	0.020	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-84	0.20		0.0099	0.00045	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-85	0.14	C	0.030	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-86	0.58	C	0.059	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-87	0.58	C86	0.059	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-88	0.16	C	0.020	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-89	ND		0.0099	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-90	1.4	C B	0.030	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-91	0.16	C88	0.020	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-92	0.30		0.0099	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-93	0.047	C	0.020	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-94	ND		0.0099	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-95	1.1		0.0099	0.00042	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-96	ND		0.0099	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-97	0.58	C86	0.059	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-98	0.050	C	0.020	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S249

Lab Sample ID: 580-77301-4

Date Collected: 05/14/18 12:00

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 60.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.80	C83	0.020	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-100	0.047	C93	0.020	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-101	1.4	C90 B	0.030	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-102	0.050	C98	0.020	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-103	0.046		0.0099	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-104	ND		0.0099	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-105	0.22		0.0099	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-106	ND		0.0099	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-107	0.078		0.0099	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-108	0.024	C	0.020	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-109	0.58	C86	0.059	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-110	1.2	C	0.020	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-111	ND		0.0099	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-112	ND		0.0099	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-113	1.4	C90 B	0.030	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-114	0.0091	J q	0.0099	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-115	1.2	C110	0.020	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-116	0.14	C85	0.030	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-117	0.14	C85	0.030	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-118	0.69	B	0.0099	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-119	0.58	C86	0.059	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-120	0.014	q	0.0099	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-121	ND		0.0099	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-122	0.0068	J q	0.0099	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-123	0.0086	J q	0.0099	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-124	0.024	C108	0.020	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-125	0.58	C86	0.059	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-126	ND		0.0099	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-127	ND		0.0099	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-128	0.21	C	0.020	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-129	2.2	C	0.040	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-130	0.12		0.0099	0.0054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-131	0.018		0.0099	0.0057	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-132	0.71		0.0099	0.0053	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-133	0.065		0.0099	0.0051	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-134	0.11	C	0.020	0.0054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-135	1.1	C	0.020	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-136	0.34		0.0099	0.00021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-137	0.048		0.0099	0.0046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-138	2.2	C129	0.040	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-139	0.042	C	0.020	0.0046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-140	0.042	C139	0.020	0.0046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-141	0.44		0.0099	0.0048	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-142	ND		0.0099	0.0051	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-143	0.11	C134	0.020	0.0054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-144	0.10		0.0099	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-145	ND		0.0099	0.00020	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-146	0.62		0.0099	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-147	2.5	C B	0.020	0.0052	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S249

Lab Sample ID: 580-77301-4

Date Collected: 05/14/18 12:00

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 60.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.016	q	0.0099	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-149	2.5	C147 B	0.020	0.0052	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-150	0.010	q	0.0099	0.00019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-151	1.1	C135	0.020	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-152	ND		0.0099	0.00020	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-153	2.3	C	0.020	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-154	0.11		0.0099	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-155	ND		0.0099	0.00019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-156	0.15	C B	0.020	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-157	0.15	C156 B	0.020	0.0045	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-158	0.17		0.0099	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-159	0.026		0.0099	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-160	2.2	C129	0.040	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-161	ND		0.0099	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-162	ND		0.0099	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-163	2.2	C129	0.040	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-164	0.16		0.0099	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-165	ND		0.0099	0.0039	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-166	0.21	C128	0.020	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-167	0.057		0.0099	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-168	2.3	C153	0.020	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-169	ND		0.0099	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-170	0.72		0.0099	0.00065	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-171	0.22	C	0.020	0.00061	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-172	0.13		0.0099	0.00060	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-173	0.22	C171	0.020	0.00061	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-174	0.82		0.0099	0.00057	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-175	0.029		0.0099	0.00055	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-176	0.11		0.0099	0.00042	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-177	0.51	B	0.0099	0.00058	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-178	0.21		0.0099	0.00059	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-179	0.44	B	0.0099	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-180	1.7	C	0.020	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-181	ND		0.0099	0.00055	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-182	0.013		0.0099	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-183	0.55	C	0.020	0.00054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-184	ND		0.0099	0.00045	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-185	0.55	C183	0.020	0.00054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-186	ND		0.0099	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-187	1.1		0.0099	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-188	ND		0.0099	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-189	0.022		0.0099	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-190	0.10	q	0.0099	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-191	0.020	q	0.0099	0.00041	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-192	ND		0.0099	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-193	1.7	C180	0.020	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-194	0.37		0.0099	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-195	0.15		0.0099	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-196	0.17		0.0099	0.00078	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S249

Lab Sample ID: 580-77301-4

Date Collected: 05/14/18 12:00

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 60.1

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.011		0.0099	0.00060	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-198	0.39	C	0.020	0.00079	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-199	0.39	C198	0.020	0.00079	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-200	0.039		0.0099	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-201	0.039	q	0.0099	0.00054	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-202	0.079	q	0.0099	0.00061	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-203	0.22		0.0099	0.00071	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-204	ND		0.0099	0.00060	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-205	0.015	q	0.0099	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-206	0.25		0.0099	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-207	0.021		0.0099	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-208	0.082		0.0099	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1
PCB-209	0.21		0.0099	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 05:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	66		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-3L	71		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-4L	65		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-15L	78		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-19L	73		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-37L	90		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-54L	83		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-77L	92		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-81L	90		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-104L	78		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-105L	90		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-114L	90		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-118L	89		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-123L	88		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-126L	86		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-155L	80		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-156L	88	C	30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-157L	88	C156	30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-167L	90		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-169L	89		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-170L	84		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-188L	95		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-189L	99		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-202L	97		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-205L	78		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-206L	76		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-208L	83		30 - 140	05/24/18 12:00	06/08/18 05:49	1
PCB-209L	65		30 - 140	05/24/18 12:00	06/08/18 05:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	90		40 - 125	05/24/18 12:00	06/08/18 05:49	1
PCB-111L	93		40 - 125	05/24/18 12:00	06/08/18 05:49	1
PCB-178L	91		40 - 125	05/24/18 12:00	06/08/18 05:49	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S248

Date Collected: 05/14/18 12:50

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-5

Matrix: Solid

Percent Solids: 40.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0073	J	0.012	0.00045	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-2	0.0054	J	0.012	0.00048	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-3	0.0058	J q	0.012	0.00051	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-4	0.018	J q	0.024	0.0050	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-5	ND		0.012	0.0035	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-6	0.012	q	0.012	0.0031	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-7	ND		0.012	0.0031	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-8	0.041		0.024	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-9	ND		0.012	0.0032	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-10	ND		0.012	0.0034	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-11	0.056		0.024	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-12	0.011	J q C	0.024	0.0031	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-13	0.011	J q C12	0.024	0.0031	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-14	ND		0.012	0.0026	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-15	0.034		0.012	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-16	0.019	q	0.012	0.00059	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-17	0.039		0.012	0.00053	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-18	0.068	C	0.024	0.00047	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-19	0.011	J	0.012	0.00065	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-20	0.13	C B	0.024	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-21	0.051	C B	0.024	0.00099	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-22	0.034		0.012	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-23	ND		0.012	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-24	ND		0.012	0.00045	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-25	0.017		0.012	0.00094	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-26	0.028	C	0.024	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-27	0.0063	J	0.012	0.00039	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-28	0.13	C20 B	0.024	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-29	0.028	C26	0.024	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-30	0.068	C18	0.024	0.00047	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-31	0.097	B	0.024	0.00099	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-32	0.024	q	0.012	0.00037	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-33	0.051	C21 B	0.024	0.00099	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-34	ND		0.012	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-35	0.0025	J	0.012	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-36	ND		0.012	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-37	0.041		0.012	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-38	ND		0.012	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-39	0.0014	J q	0.012	0.00097	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-40	0.061	C	0.036	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-41	0.061	C40	0.036	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-42	0.027	q	0.012	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-43	0.0077	J C	0.024	0.0026	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-44	0.15	C B	0.036	0.0025	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-45	0.023	J q C	0.024	0.0029	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-46	0.0069	J	0.012	0.0035	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-47	0.15	C44 B	0.036	0.0025	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-48	0.017	q	0.012	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1
PCB-49	0.10	C	0.024	0.0023	ng/g	☆	05/24/18 12:00	06/08/18 06:51	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S248

Lab Sample ID: 580-77301-5

Date Collected: 05/14/18 12:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.022	J C	0.024	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-51	0.023	J q C45	0.024	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-52	0.20		0.012	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-53	0.022	J C50	0.024	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-54	0.0012	J q	0.012	0.000042	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-55	0.0033	J q	0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-56	0.055		0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-57	ND		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-58	ND		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-59	0.010	J C	0.036	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-60	0.022		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-61	0.24	C B	0.049	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-62	0.010	J C59	0.036	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-63	0.0043	J q	0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-64	0.049		0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-65	0.15	C44 B	0.036	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-66	0.14		0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-67	0.0029	J	0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-68	0.0047	J B	0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-69	0.10	C49	0.024	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-70	0.24	C61 B	0.049	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-71	0.061	C40	0.036	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-72	0.0043	J	0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-73	0.0077	J C43	0.024	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-74	0.24	C61 B	0.049	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-75	0.010	J C59	0.036	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-76	0.24	C61 B	0.049	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-77	0.018		0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-78	ND		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-79	0.0030	J q	0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-80	ND		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-81	ND		0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-82	0.036	q	0.012	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-83	0.27	C	0.024	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-84	0.070	q	0.012	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-85	0.061	C	0.036	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-86	0.24	C	0.073	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-87	0.24	C86	0.073	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-88	0.063	C	0.024	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-89	ND		0.012	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-90	0.49	C B	0.036	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-91	0.063	C88	0.024	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-92	0.10		0.012	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-93	0.013	J C	0.024	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-94	ND		0.012	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-95	0.36		0.012	0.00042	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-96	ND		0.012	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-97	0.24	C86	0.073	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-98	0.012	J C	0.024	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S248

Lab Sample ID: 580-77301-5

Date Collected: 05/14/18 12:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.27	C83	0.024	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-100	0.013	J C93	0.024	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-101	0.49	C90 B	0.036	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-102	0.012	J C98	0.024	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-103	0.014	q	0.012	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-104	ND		0.012	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-105	0.11		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-106	ND		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-107	0.032		0.012	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-108	0.011	J C	0.024	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-109	0.24	C86	0.073	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-110	0.47	C	0.024	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-111	ND		0.012	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-112	ND		0.012	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-113	0.49	C90 B	0.036	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-114	0.0059	J q	0.012	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-115	0.47	C110	0.024	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-116	0.061	C85	0.036	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-117	0.061	C85	0.036	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-118	0.30	B	0.012	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-119	0.24	C86	0.073	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-120	0.0059	J	0.012	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-121	ND		0.012	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-122	0.0054	J	0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-123	0.0072	J	0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-124	0.011	J C108	0.024	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-125	0.24	C86	0.073	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-126	0.0022	J	0.012	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-127	ND		0.012	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-128	0.093	C	0.024	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-129	0.81	C	0.049	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-130	0.049		0.012	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-131	ND		0.012	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-132	0.24		0.012	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-133	0.016	q	0.012	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-134	0.036	C	0.024	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-135	0.33	C	0.024	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-136	0.11		0.012	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-137	0.019	q	0.012	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-138	0.81	C129	0.049	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-139	0.011	J q C	0.024	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-140	0.011	J q C139	0.024	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-141	0.16		0.012	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-142	ND		0.012	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-143	0.036	C134	0.024	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-144	0.030		0.012	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-145	ND		0.012	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-146	0.19		0.012	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-147	0.77	C B	0.024	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S248

Lab Sample ID: 580-77301-5

Date Collected: 05/14/18 12:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0061	J	0.012	0.00049	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-149	0.77	C147 B	0.024	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-150	0.0030	J	0.012	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-151	0.33	C135	0.024	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-152	0.0014	J	0.012	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-153	0.76	C	0.024	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-154	0.027		0.012	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-155	ND		0.012	0.00033	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-156	0.064	C B	0.024	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-157	0.064	C156 B	0.024	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-158	0.063		0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-159	0.0088	J	0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-160	0.81	C129	0.049	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-161	ND		0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-162	0.0026	J	0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-163	0.81	C129	0.049	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-164	0.055		0.012	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-165	ND		0.012	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-166	0.093	C128	0.024	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-167	0.026		0.012	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-168	0.76	C153	0.024	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-169	ND		0.012	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-170	0.27		0.012	0.00081	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-171	0.089	C	0.024	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-172	0.044	q	0.012	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-173	0.089	C171	0.024	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-174	0.32		0.012	0.00069	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-175	0.012		0.012	0.00067	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-176	0.040		0.012	0.00051	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-177	0.19	B	0.012	0.00071	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-178	0.080		0.012	0.00072	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-179	0.16	B	0.012	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-180	0.65	C	0.024	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-181	ND		0.012	0.00067	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-182	ND		0.012	0.00064	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-183	0.21	C	0.024	0.00065	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-184	ND		0.012	0.00055	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-185	0.21	C183	0.024	0.00065	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-186	ND		0.012	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-187	0.42		0.012	0.00062	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-188	ND		0.012	0.00046	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-189	0.0064	J q	0.012	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-190	0.053		0.012	0.00048	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-191	0.013		0.012	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-192	ND		0.012	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-193	0.65	C180	0.024	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-194	0.18		0.012	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-195	0.078		0.012	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-196	0.062	q	0.012	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S248

Lab Sample ID: 580-77301-5

Date Collected: 05/14/18 12:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0055	J	0.012	0.00062	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-198	0.16	C	0.024	0.00083	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-199	0.16	C198	0.024	0.00083	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-200	0.019		0.012	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-201	0.017		0.012	0.00057	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-202	0.031		0.012	0.00064	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-203	0.093		0.012	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-204	ND		0.012	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-205	0.0059	J q	0.012	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-206	0.071		0.012	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-207	0.0059	J	0.012	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-208	0.021		0.012	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1
PCB-209	0.056		0.012	0.00068	ng/g	☼	05/24/18 12:00	06/08/18 06:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	67		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-3L	73		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-4L	67		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-15L	80		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-19L	76		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-37L	89		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-54L	83		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-77L	91		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-81L	90		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-104L	81		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-105L	90		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-114L	94		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-118L	90		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-123L	87		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-126L	89		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-155L	82		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-156L	90	C	30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-157L	90	C156	30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-167L	91		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-169L	90		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-170L	85		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-188L	95		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-189L	97		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-202L	100		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-205L	72		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-206L	70		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-208L	85		30 - 140	05/24/18 12:00	06/08/18 06:51	1
PCB-209L	60		30 - 140	05/24/18 12:00	06/08/18 06:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	92		40 - 125	05/24/18 12:00	06/08/18 06:51	1
PCB-111L	94		40 - 125	05/24/18 12:00	06/08/18 06:51	1
PCB-178L	91		40 - 125	05/24/18 12:00	06/08/18 06:51	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S247

Date Collected: 05/14/18 14:10

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-6

Matrix: Solid

Percent Solids: 42.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.019		0.011	0.00053	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-2	0.0071	J q	0.011	0.00054	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-3	0.010	J q	0.011	0.00053	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-4	0.032		0.023	0.0041	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-5	ND		0.011	0.0032	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-6	0.018	q	0.011	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-7	0.0049	J q	0.011	0.0029	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-8	0.077		0.023	0.0026	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-9	0.0068	J q	0.011	0.0029	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-10	ND		0.011	0.0031	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-11	0.057		0.023	0.0027	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-12	0.0078	J q C	0.023	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-13	0.0078	J q C12	0.023	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-14	ND		0.011	0.0024	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-15	0.042		0.011	0.0029	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-16	0.047		0.011	0.00058	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-17	0.073		0.011	0.00052	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-18	0.12	C	0.023	0.00045	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-19	0.023		0.011	0.00063	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-20	0.18	C B	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-21	0.083	C B	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-22	0.052		0.011	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-23	ND		0.011	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-24	0.0030	J q	0.011	0.00043	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-25	0.015		0.011	0.00096	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-26	0.028	C	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-27	0.0087	J q	0.011	0.00038	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-28	0.18	C20 B	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-29	0.028	C26	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-30	0.12	C18	0.023	0.00045	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-31	0.13	B	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-32	0.042		0.011	0.00036	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-33	0.083	C21 B	0.023	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-34	0.0017	J	0.011	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-35	0.0023	J q	0.011	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-36	0.0010	J q	0.011	0.0010	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-37	0.050		0.011	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-38	ND		0.011	0.0011	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-39	0.0019	J	0.011	0.00099	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-40	0.084	C	0.034	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-41	0.084	C40	0.034	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-42	0.044		0.011	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-43	0.0051	J q C	0.023	0.0026	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-44	0.20	C B	0.034	0.0025	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-45	0.031	C	0.023	0.0030	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-46	0.0078	J q	0.011	0.0036	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-47	0.20	C44 B	0.034	0.0025	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-48	0.025		0.011	0.0028	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1
PCB-49	0.15	C	0.023	0.0023	ng/g	☆	05/24/18 12:00	06/08/18 07:53	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S247

Lab Sample ID: 580-77301-6

Date Collected: 05/14/18 14:10

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 42.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.028	C	0.023	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-51	0.031	C45	0.023	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-52	0.28		0.011	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-53	0.028	C50	0.023	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-54	0.00082	J q	0.011	0.000059	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-55	0.0049	J q	0.011	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-56	0.067		0.011	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-57	ND	I	0.011	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-58	ND		0.011	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-59	0.015	J C	0.034	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-60	0.019		0.011	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-61	0.31	C B	0.046	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-62	0.015	J C59	0.034	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-63	0.0053	J	0.011	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-64	0.062		0.011	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-65	0.20	C44 B	0.034	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-66	0.18		0.011	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-67	0.0040	J	0.011	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-68	0.0046	J q B	0.011	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-69	0.15	C49	0.023	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-70	0.31	C61 B	0.046	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-71	0.084	C40	0.034	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-72	0.0061	J	0.011	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-73	0.0051	J q C43	0.023	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-74	0.31	C61 B	0.046	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-75	0.015	J C59	0.034	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-76	0.31	C61 B	0.046	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-77	0.016	q	0.011	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-78	ND		0.011	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-79	0.0052	J	0.011	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-80	ND		0.011	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-81	ND		0.011	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-82	0.046	q	0.011	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-83	0.44	C	0.023	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-84	0.11		0.011	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-85	0.072	q C	0.034	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-86	0.31	C	0.069	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-87	0.31	C86	0.069	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-88	0.082	C	0.023	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-89	ND		0.011	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-90	0.82	C B	0.034	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-91	0.082	C88	0.023	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-92	0.19		0.011	0.00030	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-93	0.017	J C	0.023	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-94	ND		0.011	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-95	0.64		0.011	0.00034	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-96	ND		0.011	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-97	0.31	C86	0.069	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-98	0.014	J q C	0.023	0.00030	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S247

Lab Sample ID: 580-77301-6

Date Collected: 05/14/18 14:10

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 42.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.44	C83	0.023	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-100	0.017	J C93	0.023	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-101	0.82	C90 B	0.034	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-102	0.014	J q C98	0.023	0.00030	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-103	0.026		0.011	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-104	ND		0.011	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-105	0.13		0.011	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-106	ND		0.011	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-107	0.043	q	0.011	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-108	0.011	J q C	0.023	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-109	0.31	C86	0.069	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-110	0.66	C	0.023	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-111	ND		0.011	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-112	ND		0.011	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-113	0.82	C90 B	0.034	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-114	0.0055	J q	0.011	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-115	0.66	C110	0.023	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-116	0.072	q C85	0.034	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-117	0.072	q C85	0.034	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-118	0.37	B	0.011	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-119	0.31	C86	0.069	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-120	0.0094	J	0.011	0.00022	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-121	ND		0.011	0.00023	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-122	0.0040	J q	0.011	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-123	0.0057	J q	0.011	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-124	0.011	J q C108	0.023	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-125	0.31	C86	0.069	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-126	0.0021	J q	0.011	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-127	ND		0.011	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-128	0.15	C	0.023	0.0049	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-129	1.5	C	0.046	0.0050	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-130	0.092		0.011	0.0067	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-131	ND		0.011	0.0069	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-132	0.47		0.011	0.0065	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-133	0.033		0.011	0.0063	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-134	0.077	C	0.023	0.0066	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-135	0.70	C	0.023	0.00041	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-136	0.23		0.011	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-137	0.028		0.011	0.0057	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-138	1.5	C129	0.046	0.0050	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-139	0.024	C	0.023	0.0056	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-140	0.024	C139	0.023	0.0056	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-141	0.32		0.011	0.0059	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-142	ND		0.011	0.0063	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-143	0.077	C134	0.023	0.0066	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-144	0.066		0.011	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-145	ND		0.011	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-146	0.37		0.011	0.0055	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-147	1.7	C B	0.023	0.0063	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S247

Lab Sample ID: 580-77301-6

Date Collected: 05/14/18 14:10

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 42.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0070	J q	0.011	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-149	1.7	C147 B	0.023	0.0063	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-150	0.0049	J q	0.011	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-151	0.70	C135	0.023	0.00041	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-152	ND		0.011	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-153	1.6	C	0.023	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-154	0.047		0.011	0.00032	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-155	ND		0.011	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-156	0.11	C B	0.023	0.0055	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-157	0.11	C156 B	0.023	0.0055	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-158	0.12		0.011	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-159	0.029		0.011	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-160	1.5	C129	0.046	0.0050	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-161	ND		0.011	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-162	ND		0.011	0.0041	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-163	1.5	C129	0.046	0.0050	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-164	0.12		0.011	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-165	ND		0.011	0.0047	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-166	0.15	C128	0.023	0.0049	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-167	0.041		0.011	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-168	1.6	C153	0.023	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-169	ND		0.011	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-170	0.78		0.011	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-171	0.22	C	0.023	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-172	0.13		0.011	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-173	0.22	C171	0.023	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-174	0.77		0.011	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-175	0.028		0.011	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-176	0.097		0.011	0.00077	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-177	0.45	B	0.011	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-178	0.16		0.011	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-179	0.35	B	0.011	0.00081	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-180	1.7	C	0.023	0.00085	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-181	ND		0.011	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-182	0.014		0.011	0.00097	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-183	0.51	C	0.023	0.00099	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-184	ND		0.011	0.00083	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-185	0.51	C183	0.023	0.00099	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-186	ND		0.011	0.00081	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-187	0.96		0.011	0.00094	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-188	ND		0.011	0.00068	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-189	0.027		0.011	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-190	0.13		0.011	0.00073	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-191	0.031		0.011	0.00076	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-192	ND		0.011	0.00085	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-193	1.7	C180	0.023	0.00085	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-194	0.63		0.011	0.0035	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-195	0.27		0.011	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-196	0.24		0.011	0.00080	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S247

Lab Sample ID: 580-77301-6

Date Collected: 05/14/18 14:10

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 42.9

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.021	q	0.011	0.00061	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-198	0.49	C	0.023	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-199	0.49	C198	0.023	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-200	0.049		0.011	0.00055	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-201	0.069		0.011	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-202	0.087		0.011	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-203	0.29		0.011	0.00073	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-204	ND		0.011	0.00062	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-205	0.030		0.011	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-206	0.19		0.011	0.0043	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-207	0.026		0.011	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-208	0.043		0.011	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1
PCB-209	0.065		0.011	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 07:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	65		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-3L	72		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-4L	64		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-15L	76		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-19L	74		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-37L	88		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-54L	82		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-77L	95		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-81L	91		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-104L	78		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-105L	92		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-114L	92		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-118L	93		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-123L	91		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-126L	86		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-155L	80		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-156L	86	C	30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-157L	86	C156	30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-167L	89		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-169L	85		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-170L	88		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-188L	103		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-189L	96		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-202L	104		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-205L	73		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-206L	70		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-208L	82		30 - 140	05/24/18 12:00	06/08/18 07:53	1
PCB-209L	58		30 - 140	05/24/18 12:00	06/08/18 07:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	89		40 - 125	05/24/18 12:00	06/08/18 07:53	1
PCB-111L	92		40 - 125	05/24/18 12:00	06/08/18 07:53	1
PCB-178L	96		40 - 125	05/24/18 12:00	06/08/18 07:53	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S246

Date Collected: 05/14/18 15:15

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-7

Matrix: Solid

Percent Solids: 37.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.24		0.013	0.00060	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-2	0.0073	J q	0.013	0.00064	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-3	0.027	q	0.013	0.00065	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-4	1.1		0.027	0.0044	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-5	0.0076	J q	0.013	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-6	0.19		0.013	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-7	0.014	q	0.013	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-8	0.81		0.027	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-9	0.025	q	0.013	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-10	0.023	q	0.013	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-11	0.063		0.027	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-12	0.058	C	0.027	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-13	0.058	C12	0.027	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-14	ND		0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-15	0.19		0.013	0.0030	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-16	0.19		0.013	0.00062	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-17	0.57		0.013	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-18	0.50	C	0.027	0.00049	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-19	0.24		0.013	0.00068	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-20	0.87	C B	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-21	0.36	C B	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-22	0.25		0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-23	ND		0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-24	0.0093	J	0.013	0.00047	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-25	0.084		0.013	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-26	0.15	C	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-27	0.12		0.013	0.00041	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-28	0.87	C20 B	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-29	0.15	C26	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-30	0.50	C18	0.027	0.00049	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-31	0.72	B	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-32	0.39		0.013	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-33	0.36	C21 B	0.027	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-34	ND		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-35	0.0092	J	0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-36	ND		0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-37	0.19		0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-38	ND		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-39	ND		0.013	0.0014	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-40	0.22	C	0.040	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-41	0.22	C40	0.040	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-42	0.089		0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-43	0.011	J q C	0.027	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-44	0.34	C B	0.040	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-45	0.088	C	0.027	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-46	0.028		0.013	0.0031	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-47	0.34	C44 B	0.040	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-48	0.082		0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-49	0.22	C	0.027	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S246

Lab Sample ID: 580-77301-7

Date Collected: 05/14/18 15:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 37.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.064	C	0.027	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-51	0.088	C45	0.027	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-52	0.37		0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-53	0.064	C50	0.027	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-54	0.0029	J q	0.013	0.000097	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-55	0.013		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-56	0.13		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-57	0.0025	J q	0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-58	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-59	0.034	J C	0.040	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-60	0.072		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-61	0.51	C B	0.053	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-62	0.034	J C59	0.040	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-63	0.012	J	0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-64	0.13		0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-65	0.34	C44 B	0.040	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-66	0.30		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-67	0.011	J q	0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-68	0.0030	J q B	0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-69	0.22	C49	0.027	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-70	0.51	C61 B	0.053	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-71	0.22	C40	0.040	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-72	0.0047	J q	0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-73	0.011	J q C43	0.027	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-74	0.51	C61 B	0.053	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-75	0.034	J C59	0.040	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-76	0.51	C61 B	0.053	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-77	0.034		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-78	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-79	0.0054	J	0.013	0.0016	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-80	ND		0.013	0.0015	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-81	ND		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-82	0.047		0.013	0.00058	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-83	0.29	C	0.027	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-84	0.10		0.013	0.00058	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-85	0.075	C	0.040	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-86	0.28	C	0.080	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-87	0.28	C86	0.080	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-88	0.067	C	0.027	0.00052	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-89	0.0060	J	0.013	0.00057	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-90	0.47	C B	0.040	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-91	0.067	C88	0.027	0.00052	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-92	0.10		0.013	0.00049	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-93	0.012	J q C	0.027	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-94	ND		0.013	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-95	0.37		0.013	0.00055	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-96	0.0045	J	0.013	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-97	0.28	C86	0.080	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-98	0.017	J q C	0.027	0.00048	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S246

Lab Sample ID: 580-77301-7

Date Collected: 05/14/18 15:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 37.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.29	C83	0.027	0.00053	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-100	0.012	J q C93	0.027	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-101	0.47	C90 B	0.040	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-102	0.017	J q C98	0.027	0.00048	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-103	0.0080	J q	0.013	0.00050	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-104	ND		0.013	0.00038	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-105	0.13		0.013	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-106	ND		0.013	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-107	0.028	q	0.013	0.0021	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-108	0.011	J q C	0.027	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-109	0.28	C86	0.080	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-110	0.52	C	0.027	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-111	ND		0.013	0.00035	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-112	ND		0.013	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-113	0.47	C90 B	0.040	0.00044	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-114	0.0062	J	0.013	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-115	0.52	C110	0.027	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-116	0.075	C85	0.040	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-117	0.075	C85	0.040	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-118	0.33	B	0.013	0.0019	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-119	0.28	C86	0.080	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-120	0.0039	J q	0.013	0.00036	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-121	ND		0.013	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-122	0.0039	J q	0.013	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-123	0.0040	J q	0.013	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-124	0.011	J q C108	0.027	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-125	0.28	C86	0.080	0.00043	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-126	ND		0.013	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-127	ND		0.013	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-128	0.086	C	0.027	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-129	0.69	C	0.053	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-130	0.044		0.013	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-131	0.0059	J q	0.013	0.0040	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-132	0.21		0.013	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-133	0.015		0.013	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-134	0.032	C	0.027	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-135	0.25	C	0.027	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-136	0.084		0.013	0.00029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-137	0.024		0.013	0.0033	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-138	0.69	C129	0.053	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-139	0.0092	J q C	0.027	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-140	0.0092	J q C139	0.027	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-141	0.12		0.013	0.0034	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-142	ND		0.013	0.0036	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-143	0.032	C134	0.027	0.0038	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-144	0.021	q	0.013	0.00037	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-145	ND		0.013	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-146	0.14		0.013	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-147	0.63	C B	0.027	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S246

Lab Sample ID: 580-77301-7

Date Collected: 05/14/18 15:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 37.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0033	J q	0.013	0.00039	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-149	0.63	C147 B	0.027	0.0037	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-150	0.0011	J q	0.013	0.00026	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-151	0.25	C135	0.027	0.00040	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-152	ND		0.013	0.00028	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-153	0.62	C	0.027	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-154	0.014		0.013	0.00031	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-155	ND		0.013	0.00027	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-156	0.062	C B	0.027	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-157	0.062	C156 B	0.027	0.0032	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-158	0.061		0.013	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-159	0.0058	J q	0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-160	0.69	C129	0.053	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-161	ND		0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-162	ND		0.013	0.0024	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-163	0.69	C129	0.053	0.0029	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-164	0.040	q	0.013	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-165	ND		0.013	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-166	0.086	C128	0.027	0.0028	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-167	0.018	q	0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-168	0.62	C153	0.027	0.0025	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-169	ND		0.013	0.0018	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-170	0.21		0.013	0.0013	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-171	0.060	C	0.027	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-172	0.042		0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-173	0.060	C171	0.027	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-174	0.22		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-175	0.0072	J q	0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-176	0.030		0.013	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-177	0.13	B	0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-178	0.047	q	0.013	0.0012	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-179	0.11	B	0.013	0.00087	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-180	0.47	C	0.027	0.00091	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-181	ND		0.013	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-182	ND		0.013	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-183	0.16	C	0.027	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-184	ND		0.013	0.00089	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-185	0.16	C183	0.027	0.0011	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-186	ND		0.013	0.00086	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-187	0.31		0.013	0.0010	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-188	ND		0.013	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-189	0.0049	J	0.013	0.0023	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-190	0.034	q	0.013	0.00078	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-191	0.0093	J	0.013	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-192	ND		0.013	0.00091	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-193	0.47	C180	0.027	0.00091	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-194	0.12		0.013	0.0020	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-195	0.052		0.013	0.0022	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-196	0.048	q	0.013	0.00082	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S246

Lab Sample ID: 580-77301-7

Date Collected: 05/14/18 15:15

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 37.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0034	J	0.013	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-198	0.13	C	0.027	0.00084	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-199	0.13	C198	0.027	0.00084	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-200	0.014	q	0.013	0.00056	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-201	0.016	q	0.013	0.00057	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-202	0.031		0.013	0.00064	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-203	0.083		0.013	0.00074	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-204	ND		0.013	0.00063	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-205	ND		0.013	0.0017	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-206	0.11		0.013	0.0042	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-207	0.011	J	0.013	0.0027	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-208	0.027		0.013	0.0026	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1
PCB-209	0.069	q	0.013	0.00060	ng/g	☼	05/24/18 12:00	06/08/18 08:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	72		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-3L	79		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-4L	71		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-15L	82		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-19L	78		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-37L	93		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-54L	84		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-77L	98		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-81L	96		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-104L	77		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-105L	93		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-114L	95		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-118L	94		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-123L	91		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-126L	93		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-155L	83		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-156L	89	C	30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-157L	89	C156	30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-167L	91		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-169L	91		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-170L	87		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-188L	98		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-189L	100		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-202L	101		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-205L	78		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-206L	70		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-208L	85		30 - 140	05/24/18 12:00	06/08/18 08:54	1
PCB-209L	62		30 - 140	05/24/18 12:00	06/08/18 08:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	98		40 - 125	05/24/18 12:00	06/08/18 08:54	1
PCB-111L	96		40 - 125	05/24/18 12:00	06/08/18 08:54	1
PCB-178L	97		40 - 125	05/24/18 12:00	06/08/18 08:54	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S252

Date Collected: 05/14/18 09:45

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-8

Matrix: Solid

Percent Solids: 61.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0053	J	0.0095	0.00048	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-2	0.0079	J	0.0095	0.00052	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-3	0.0037	J q	0.0095	0.00055	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-4	0.017	J q	0.019	0.0071	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-5	ND		0.0095	0.0054	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-6	0.011	q	0.0095	0.0047	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-7	ND		0.0095	0.0048	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-8	0.035		0.019	0.0044	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-9	ND		0.0095	0.0049	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-10	ND		0.0095	0.0053	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-11	0.064		0.019	0.0046	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-12	ND	C	0.019	0.0048	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-13	ND	C12	0.019	0.0048	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-14	ND		0.0095	0.0041	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-15	0.023	q	0.0095	0.0048	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-16	0.027		0.0095	0.00096	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-17	0.053	q	0.0095	0.00087	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-18	0.083	C	0.019	0.00076	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-19	0.016		0.0095	0.0011	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-20	0.18	C	0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-21	0.080	C	0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-22	0.038		0.0095	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-23	ND		0.0095	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-24	0.00094	J	0.0095	0.00073	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-25	0.015	q	0.0095	0.0011	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-26	0.022	C	0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-27	0.0075	J	0.0095	0.00063	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-28	0.18	C20	0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-29	0.022	C26	0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-30	0.083	C18	0.019	0.00076	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-31	0.12		0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-32	0.041		0.0095	0.00060	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-33	0.080	C21	0.019	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-34	ND		0.0095	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-35	0.0026	J	0.0095	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-36	ND		0.0095	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-37	0.039		0.0095	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-38	ND		0.0095	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-39	0.0035	J q	0.0095	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-40	0.13	C	0.029	0.0031	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-41	0.13	C40	0.029	0.0031	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-42	0.080		0.0095	0.0031	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-43	0.012	J C q	0.019	0.0029	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-44	0.40	C	0.029	0.0027	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-45	0.095	C	0.019	0.0032	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-46	0.016		0.0095	0.0039	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-47	0.40	C44	0.029	0.0027	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-48	0.034		0.0095	0.0031	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1
PCB-49	0.32	C	0.019	0.0025	ng/g	☆	05/29/18 09:29	06/08/18 18:59	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S252

Lab Sample ID: 580-77301-8

Date Collected: 05/14/18 09:45

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 61.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.076	C	0.019	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-51	0.095	C45	0.019	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-52	0.39		0.0095	0.0031	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-53	0.076	C50	0.019	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-54	0.0062	J q	0.0095	0.000096	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-55	0.0051	J q	0.0095	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-56	0.086		0.0095	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-57	ND		0.0095	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-58	0.0029	J q	0.0095	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-59	0.025	J C	0.029	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-60	0.017	q	0.0095	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-61	0.44	C	0.038	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-62	0.025	J C59	0.029	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-63	0.010		0.0095	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-64	0.090		0.0095	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-65	0.40	C44	0.029	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-66	0.31		0.0095	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-67	0.0069	J	0.0095	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-68	0.024		0.0095	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-69	0.32	C49	0.019	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-70	0.44	C61	0.038	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-71	0.13	C40	0.029	0.0031	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-72	0.016		0.0095	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-73	0.012	J C43 q	0.019	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-74	0.44	C61	0.038	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-75	0.025	J C59	0.029	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-76	0.44	C61	0.038	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-77	0.016	q	0.0095	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-78	ND		0.0095	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-79	0.0087	J q	0.0095	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-80	ND		0.0095	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-81	ND		0.0095	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-82	0.032		0.0095	0.00038	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-83	0.49	C	0.019	0.00035	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-84	0.12		0.0095	0.00038	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-85	0.067	C B	0.029	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-86	0.24	C B	0.057	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-87	0.24	B C86	0.057	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-88	0.19	C	0.019	0.00034	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-89	ND		0.0095	0.00037	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-90	0.63	C	0.029	0.00029	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-91	0.19	C88	0.019	0.00034	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-92	0.15		0.0095	0.00033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-93	0.051	C q	0.019	0.00033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-94	0.015		0.0095	0.00037	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-95	0.44		0.0095	0.00036	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-96	0.011	q	0.0095	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-97	0.24	B C86	0.057	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-98	0.033	C	0.019	0.00032	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S252

Lab Sample ID: 580-77301-8

Date Collected: 05/14/18 09:45

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 61.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.49	C83	0.019	0.00035	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-100	0.051	C93 q	0.019	0.00033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-101	0.63	C90	0.029	0.00029	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-102	0.033	C98	0.019	0.00032	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-103	0.033		0.0095	0.00033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-104	ND		0.0095	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-105	0.074		0.0095	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-106	ND		0.0095	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-107	0.049		0.0095	0.0016	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-108	0.0088	J C	0.019	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-109	0.24	B C86	0.057	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-110	0.53	C	0.019	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-111	ND		0.0095	0.00023	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-112	ND		0.0095	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-113	0.63	C90	0.029	0.00029	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-114	0.0042	J q	0.0095	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-115	0.53	C110	0.019	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-116	0.067	C85 B	0.029	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-117	0.067	C85 B	0.029	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-118	0.35		0.0095	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-119	0.24	B C86	0.057	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-120	0.014		0.0095	0.00023	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-121	ND		0.0095	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-122	0.0078	J	0.0095	0.0017	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-123	0.0078	J q	0.0095	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-124	0.0088	J C108	0.019	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-125	0.24	B C86	0.057	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-126	ND		0.0095	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-127	ND		0.0095	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-128	0.084	C	0.019	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-129	0.69	C	0.038	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-130	0.057		0.0095	0.0045	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-131	0.0064	J q	0.0095	0.0047	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-132	0.22		0.0095	0.0044	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-133	0.037	q	0.0095	0.0043	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-134	0.042	C B	0.019	0.0045	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-135	0.33	C	0.019	0.00046	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-136	0.13		0.0095	0.00033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-137	0.019		0.0095	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-138	0.69	C129	0.038	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-139	0.017	J C q	0.019	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-140	0.017	J C139 q	0.019	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-141	0.11		0.0095	0.0040	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-142	ND		0.0095	0.0043	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-143	0.042	C134 B	0.019	0.0045	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-144	0.021		0.0095	0.00042	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-145	ND		0.0095	0.00032	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-146	0.31		0.0095	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-147	1.1	C	0.019	0.0043	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S252

Lab Sample ID: 580-77301-8

Date Collected: 05/14/18 09:45

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 61.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.011	q	0.0095	0.00045	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-149	1.1	C147	0.019	0.0043	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-150	0.017		0.0095	0.00031	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-151	0.33	C135	0.019	0.00046	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-152	ND		0.0095	0.00033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-153	0.88	C B	0.019	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-154	0.070		0.0095	0.00036	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-155	ND		0.0095	0.00031	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-156	0.044	C B q	0.019	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-157	0.044	C156 B q	0.019	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-158	0.048		0.0095	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-159	0.0089	J	0.0095	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-160	0.69	C129	0.038	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-161	ND		0.0095	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-162	0.0035	J	0.0095	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-163	0.69	C129	0.038	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-164	0.056		0.0095	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-165	ND		0.0095	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-166	0.084	C128	0.019	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-167	0.015	q	0.0095	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-168	0.88	B C153	0.019	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-169	ND		0.0095	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-170	0.22		0.0095	0.00094	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-171	0.062	C	0.019	0.00080	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-172	0.038		0.0095	0.00079	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-173	0.062	C171	0.019	0.00080	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-174	0.23		0.0095	0.00074	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-175	0.011		0.0095	0.00072	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-176	0.032		0.0095	0.00054	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-177	0.15		0.0095	0.00077	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-178	0.077		0.0095	0.00078	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-179	0.15		0.0095	0.00058	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-180	0.47	C	0.019	0.00060	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-181	ND		0.0095	0.00072	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-182	0.0048	J q	0.0095	0.00069	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-183	0.16	C	0.019	0.00071	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-184	ND		0.0095	0.00059	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-185	0.16	C183	0.019	0.00071	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-186	ND		0.0095	0.00057	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-187	0.38		0.0095	0.00067	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-188	0.0045	J	0.0095	0.00047	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-189	0.0052	J	0.0095	0.0019	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-190	0.032		0.0095	0.00052	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-191	0.0073	J	0.0095	0.00054	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-192	ND		0.0095	0.00061	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-193	0.47	C180	0.019	0.00060	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-194	0.13		0.0095	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-195	0.051	q	0.0095	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-196	0.056		0.0095	0.00058	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S252

Lab Sample ID: 580-77301-8

Date Collected: 05/14/18 09:45

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 61.3

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0045	J	0.0095	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-198	0.12	C	0.019	0.00059	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-199	0.12	C198	0.019	0.00059	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-200	0.014		0.0095	0.00039	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-201	0.016		0.0095	0.00040	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-202	0.028		0.0095	0.00045	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-203	0.067		0.0095	0.00052	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-204	ND		0.0095	0.00045	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-205	0.0051	J q	0.0095	0.0017	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-206	0.053		0.0095	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-207	0.0055	J q	0.0095	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-208	0.012		0.0095	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1
PCB-209	0.11		0.0095	0.00061	ng/g	☼	05/29/18 09:29	06/08/18 18:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	70		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-3L	79		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-4L	70		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-15L	80		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-19L	87		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-37L	90		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-54L	92		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-77L	84		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-81L	83		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-104L	85		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-105L	95		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-114L	96		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-118L	93		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-123L	93		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-126L	86		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-155L	85		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-156L	83	C	30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-157L	83	C156	30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-167L	87		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-169L	82		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-170L	80		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-188L	102		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-189L	105		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-202L	100		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-205L	78		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-206L	73		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-208L	88		30 - 140	05/29/18 09:29	06/08/18 18:59	1
PCB-209L	61		30 - 140	05/29/18 09:29	06/08/18 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	93		40 - 125	05/29/18 09:29	06/08/18 18:59	1
PCB-111L	91		40 - 125	05/29/18 09:29	06/08/18 18:59	1
PCB-178L	96		40 - 125	05/29/18 09:29	06/08/18 18:59	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S244

Date Collected: 05/14/18 15:50

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-9

Matrix: Solid

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.016		0.013	0.00039	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-2	0.0055	J q	0.013	0.00043	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-3	0.0086	J q	0.013	0.00046	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-4	0.025		0.025	0.0076	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-5	ND		0.013	0.0058	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-6	0.015		0.013	0.0051	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-7	0.0054	J q	0.013	0.0052	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-8	0.042		0.025	0.0047	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-9	ND		0.013	0.0054	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-10	ND		0.013	0.0057	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-11	0.039		0.025	0.0050	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-12	0.0080	J q C	0.025	0.0052	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-13	0.0080	J q C12	0.025	0.0052	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-14	ND		0.013	0.0044	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-15	0.053		0.013	0.0052	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-16	0.021	q	0.013	0.0010	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-17	0.049		0.013	0.00094	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-18	0.068	C	0.025	0.00083	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-19	0.014		0.013	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-20	0.15	C	0.025	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-21	0.052	C	0.025	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-22	0.047		0.013	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-23	ND		0.013	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-24	0.0030	J	0.013	0.00079	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-25	0.014		0.013	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-26	0.025	C	0.025	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-27	0.0073	J q	0.013	0.00069	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-28	0.15	C20	0.025	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-29	0.025	C26	0.025	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-30	0.068	C18	0.025	0.00083	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-31	0.11		0.025	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-32	0.032	q	0.013	0.00066	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-33	0.052	C21	0.025	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-34	ND		0.013	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-35	ND		0.013	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-36	ND		0.013	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-37	0.050		0.013	0.0013	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-38	ND		0.013	0.0014	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-39	ND		0.013	0.0012	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-40	0.096	C	0.038	0.0039	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-41	0.096	C40	0.038	0.0039	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-42	0.050		0.013	0.0040	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-43	0.0076	J q C	0.025	0.0037	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-44	0.28	C	0.038	0.0035	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-45	0.037	C	0.025	0.0041	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-46	ND		0.013	0.0050	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-47	0.28	C44	0.038	0.0035	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-48	0.024	q	0.013	0.0039	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1
PCB-49	0.19	C	0.025	0.0032	ng/g	☆	05/29/18 09:29	06/08/18 20:01	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S244

Lab Sample ID: 580-77301-9

Date Collected: 05/14/18 15:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.031	C	0.025	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-51	0.037	C45	0.025	0.0041	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-52	0.52		0.013	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-53	0.031	C50	0.025	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-54	0.00078	J q	0.013	0.000044	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-55	0.0044	J	0.013	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-56	0.089		0.013	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-57	ND		0.013	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-58	ND		0.013	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-59	0.015	J q C	0.038	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-60	0.036		0.013	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-61	0.48	C	0.050	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-62	0.015	J q C59	0.038	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-63	0.0082	J	0.013	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-64	0.092		0.013	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-65	0.28	C44	0.038	0.0035	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-66	0.26		0.013	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-67	ND		0.013	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-68	0.0043	J	0.013	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-69	0.19	C49	0.025	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-70	0.48	C61	0.050	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-71	0.096	C40	0.038	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-72	0.0055	J	0.013	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-73	0.0076	J q C43	0.025	0.0037	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-74	0.48	C61	0.050	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-75	0.015	J q C59	0.038	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-76	0.48	C61	0.050	0.0027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-77	0.017	q	0.013	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-78	ND		0.013	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-79	0.0084	J	0.013	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-80	ND		0.013	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-81	ND		0.013	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-82	0.14		0.013	0.00027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-83	0.66	C	0.025	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-84	0.27		0.013	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-85	0.20	C B	0.038	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-86	0.78	C B	0.075	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-87	0.78	C86 B	0.075	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-88	0.15	C	0.025	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-89	ND		0.013	0.00027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-90	1.2	C	0.038	0.00021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-91	0.15	C88	0.025	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-92	0.20	q	0.013	0.00023	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-93	0.018	J q C	0.025	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-94	ND		0.013	0.00027	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-95	0.93		0.013	0.00026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-96	ND		0.013	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-97	0.78	C86 B	0.075	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-98	0.027	C	0.025	0.00023	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S244

Lab Sample ID: 580-77301-9

Date Collected: 05/14/18 15:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.66	C83	0.025	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-100	0.018	J q C93	0.025	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-101	1.2	C90	0.038	0.00021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-102	0.027	C98	0.025	0.00023	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-103	0.010	J q	0.013	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-104	ND		0.013	0.00018	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-105	0.38		0.013	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-106	ND		0.013	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-107	0.079		0.013	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-108	0.041	C	0.025	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-109	0.78	C86 B	0.075	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-110	1.4	C	0.025	0.00017	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-111	ND		0.013	0.00017	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-112	ND		0.013	0.00018	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-113	1.2	C90	0.038	0.00021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-114	0.021		0.013	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-115	1.4	C110	0.025	0.00017	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-116	0.20	C85 B	0.038	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-117	0.20	C85 B	0.038	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-118	1.1		0.013	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-119	0.78	C86 B	0.075	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-120	ND		0.013	0.00017	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-121	ND		0.013	0.00017	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-122	0.015		0.013	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-123	0.017	q	0.013	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-124	0.041	C108	0.025	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-125	0.78	C86 B	0.075	0.00020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-126	ND		0.013	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-127	ND		0.013	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-128	0.25	C	0.025	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-129	1.6	C	0.050	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-130	0.10		0.013	0.0040	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-131	0.015	q	0.013	0.0042	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-132	0.51		0.013	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-133	0.017	q	0.013	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-134	0.081	C B	0.025	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-135	0.41	C	0.025	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-136	0.15		0.013	0.00032	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-137	0.072		0.013	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-138	1.6	C129	0.050	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-139	0.030	C	0.025	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-140	0.030	C139	0.025	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-141	0.25		0.013	0.0035	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-142	ND		0.013	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-143	0.081	C134 B	0.025	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-144	0.055		0.013	0.00040	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-145	0.0015	J q B	0.013	0.00030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-146	0.22		0.013	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-147	1.2	C	0.025	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S244

Lab Sample ID: 580-77301-9

Date Collected: 05/14/18 15:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0030	J	0.013	0.00042	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-149	1.2	C147	0.025	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-150	0.0023	J	0.013	0.00029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-151	0.41	C135	0.025	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-152	0.0016	J q	0.013	0.00031	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-153	1.1	C B	0.025	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-154	0.019		0.013	0.00034	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-155	ND		0.013	0.00029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-156	0.18	C B	0.025	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-157	0.18	C156 B	0.025	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-158	0.16		0.013	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-159	0.0084	J q	0.013	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-160	1.6	C129	0.050	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-161	ND		0.013	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-162	0.0052	J q	0.013	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-163	1.6	C129	0.050	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-164	0.10		0.013	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-165	ND		0.013	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-166	0.25	C128	0.025	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-167	0.059		0.013	0.0019	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-168	1.1	C153 B	0.025	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-169	ND		0.013	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-170	0.32		0.013	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-171	0.091	C	0.025	0.00098	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-172	0.047		0.013	0.00097	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-173	0.091	C171	0.025	0.00098	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-174	0.29		0.013	0.00091	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-175	0.012	J	0.013	0.00088	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-176	0.037		0.013	0.00067	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-177	0.18		0.013	0.00094	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-178	0.061		0.013	0.00095	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-179	0.13		0.013	0.00070	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-180	0.59	C	0.025	0.00074	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-181	0.0053	J q	0.013	0.00088	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-182	ND		0.013	0.00085	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-183	0.20	C	0.025	0.00086	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-184	ND		0.013	0.00072	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-185	0.20	C183	0.025	0.00086	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-186	ND		0.013	0.00070	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-187	0.38		0.013	0.00082	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-188	ND		0.013	0.00058	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-189	0.010	J	0.013	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-190	0.056		0.013	0.00064	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-191	0.013		0.013	0.00066	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-192	ND		0.013	0.00074	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-193	0.59	C180	0.025	0.00074	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-194	0.17		0.013	0.0017	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-195	0.058	q	0.013	0.0018	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-196	0.062	q	0.013	0.00063	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S244

Lab Sample ID: 580-77301-9

Date Collected: 05/14/18 15:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 39.5

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0055	J q	0.013	0.00048	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-198	0.18	C	0.025	0.00064	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-199	0.18	C198	0.025	0.00064	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-200	0.015	q	0.013	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-201	0.022		0.013	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-202	0.037		0.013	0.00049	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-203	0.11		0.013	0.00057	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-204	ND		0.013	0.00048	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-205	0.0084	J q	0.013	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-206	0.13		0.013	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-207	0.013		0.013	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-208	0.028	q	0.013	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1
PCB-209	0.082		0.013	0.00023	ng/g	☼	05/29/18 09:29	06/08/18 20:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	67		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-3L	75		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-4L	65		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-15L	72		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-19L	77		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-37L	83		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-54L	86		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-77L	85		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-81L	83		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-104L	76		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-105L	87		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-114L	87		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-118L	83		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-123L	84		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-126L	81		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-155L	77		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-156L	85	C	30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-157L	85	C156	30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-167L	83		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-169L	82		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-170L	80		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-188L	95		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-189L	97		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-202L	99		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-205L	74		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-206L	67		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-208L	82		30 - 140	05/29/18 09:29	06/08/18 20:01	1
PCB-209L	61		30 - 140	05/29/18 09:29	06/08/18 20:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	90		40 - 125	05/29/18 09:29	06/08/18 20:01	1
PCB-111L	87		40 - 125	05/29/18 09:29	06/08/18 20:01	1
PCB-178L	93		40 - 125	05/29/18 09:29	06/08/18 20:01	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S227

Date Collected: 05/14/18 16:50

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-10

Matrix: Solid

Percent Solids: 40.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	0.0030	J q	0.012	0.00046	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-2	0.0053	J q	0.012	0.00048	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-3	0.0059	J	0.012	0.00048	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-4	0.030	q	0.024	0.0075	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-5	ND		0.012	0.0058	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-6	0.012	q	0.012	0.0051	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-7	ND		0.012	0.0053	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-8	0.055		0.024	0.0047	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-9	ND		0.012	0.0054	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-10	ND		0.012	0.0057	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-11	0.057		0.024	0.0050	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-12	0.010	J q C	0.024	0.0052	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-13	0.010	J q C12	0.024	0.0052	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-14	ND		0.012	0.0044	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-15	0.036	q	0.012	0.0053	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-16	0.040		0.012	0.0010	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-17	0.068		0.012	0.00093	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-18	0.11	C	0.024	0.00082	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-19	0.024		0.012	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-20	0.21	C	0.024	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-21	0.090	C	0.024	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-22	0.059	q	0.012	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-23	ND		0.012	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-24	ND		0.012	0.00078	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-25	0.016		0.012	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-26	0.031	C	0.024	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-27	0.0082	J q	0.012	0.00068	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-28	0.21	C20	0.024	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-29	0.031	C26	0.024	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-30	0.11	C18	0.024	0.00082	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-31	0.16		0.024	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-32	0.042		0.012	0.00065	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-33	0.090	C21	0.024	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-34	ND		0.012	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-35	0.0022	J q	0.012	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-36	0.0027	J q	0.012	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-37	0.066		0.012	0.0014	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-38	ND		0.012	0.0015	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-39	ND		0.012	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-40	0.12	C	0.036	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-41	0.12	C40	0.036	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-42	0.059		0.012	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-43	0.0080	J q C	0.024	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-44	0.24	C	0.036	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-45	0.040	C	0.024	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-46	0.011	J q	0.012	0.0040	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-47	0.24	C44	0.036	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-48	0.039		0.012	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-49	0.16	C	0.024	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S227

Lab Sample ID: 580-77301-10

Date Collected: 05/14/18 16:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	0.034	C	0.024	0.0031	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-51	0.040	C45	0.024	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-52	0.30		0.012	0.0031	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-53	0.034	C50	0.024	0.0031	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-54	0.0013	J q	0.012	0.000063	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-55	0.0067	J	0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-56	0.098		0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-57	ND		0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-58	ND		0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-59	0.020	J C	0.036	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-60	0.037	q	0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-61	0.40	C	0.048	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-62	0.020	J C59	0.036	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-63	0.0080	J	0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-64	0.083	q	0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-65	0.24	C44	0.036	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-66	0.24		0.012	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-67	0.0061	J	0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-68	0.0028	J q	0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-69	0.16	C49	0.024	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-70	0.40	C61	0.048	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-71	0.12	C40	0.036	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-72	0.0036	J q	0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-73	0.0080	J q C43	0.024	0.0030	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-74	0.40	C61	0.048	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-75	0.020	J C59	0.036	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-76	0.40	C61	0.048	0.0022	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-77	0.026		0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-78	ND		0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-79	0.0032	J q	0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-80	ND		0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-81	ND		0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-82	0.067		0.012	0.00058	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-83	0.34	C	0.024	0.00053	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-84	0.12	q	0.012	0.00058	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-85	0.10	C B	0.036	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-86	0.35	C B	0.073	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-87	0.35	C86 B	0.073	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-88	0.084	C	0.024	0.00052	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-89	ND		0.012	0.00057	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-90	0.57	C	0.036	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-91	0.084	C88	0.024	0.00052	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-92	0.088	q	0.012	0.00050	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-93	0.011	J q C	0.024	0.00050	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-94	ND		0.012	0.00057	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-95	0.47		0.012	0.00055	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-96	0.0050	J	0.012	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-97	0.35	C86 B	0.073	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-98	0.014	J q C	0.024	0.00049	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S227

Lab Sample ID: 580-77301-10

Date Collected: 05/14/18 16:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	0.34	C83	0.024	0.00053	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-100	0.011	J q C93	0.024	0.00050	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-101	0.57	C90	0.036	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-102	0.014	J q C98	0.024	0.00049	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-103	0.0084	J q	0.012	0.00050	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-104	ND		0.012	0.00038	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-105	0.18		0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-106	ND		0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-107	0.038		0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-108	0.018	J C	0.024	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-109	0.35	C86 B	0.073	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-110	0.68	C	0.024	0.00037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-111	ND		0.012	0.00035	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-112	ND		0.012	0.00037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-113	0.57	C90	0.036	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-114	0.0060	J q	0.012	0.0019	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-115	0.68	C110	0.024	0.00037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-116	0.10	C85 B	0.036	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-117	0.10	C85 B	0.036	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-118	0.45		0.012	0.0019	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-119	0.35	C86 B	0.073	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-120	0.0040	J q	0.012	0.00036	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-121	ND		0.012	0.00037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-122	0.0075	J q	0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-123	0.0072	J	0.012	0.0019	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-124	0.018	J C108	0.024	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-125	0.35	C86 B	0.073	0.00043	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-126	0.0031	J	0.012	0.0021	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-127	ND		0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-128	0.13	C	0.024	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-129	0.94	C	0.048	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-130	0.055		0.012	0.0039	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-131	0.011	J	0.012	0.0041	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-132	0.27		0.012	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-133	0.014		0.012	0.0037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-134	0.042	q C B	0.024	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-135	0.26	C	0.024	0.00036	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-136	0.092		0.012	0.00026	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-137	0.037		0.012	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-138	0.94	C129	0.048	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-139	0.013	J q C	0.024	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-140	0.013	J q C139	0.024	0.0033	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-141	0.17		0.012	0.0034	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-142	ND		0.012	0.0037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-143	0.042	q C134 B	0.024	0.0038	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-144	0.031		0.012	0.00032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-145	ND		0.012	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-146	0.15		0.012	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-147	0.76	C	0.024	0.0037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S227

Lab Sample ID: 580-77301-10

Date Collected: 05/14/18 16:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	0.0030	J q	0.012	0.00035	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-149	0.76	C147	0.024	0.0037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-150	0.0015	J q	0.012	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-151	0.26	C135	0.024	0.00036	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-152	0.00091	J q	0.012	0.00025	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-153	0.72	C B	0.024	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-154	0.010	J q	0.012	0.00028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-155	ND		0.012	0.00024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-156	0.087	C B	0.024	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-157	0.087	C156 B	0.024	0.0032	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-158	0.094		0.012	0.0023	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-159	ND		0.012	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-160	0.94	C129	0.048	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-161	ND		0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-162	ND		0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-163	0.94	C129	0.048	0.0029	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-164	0.062		0.012	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-165	ND		0.012	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-166	0.13	C128	0.024	0.0028	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-167	0.029		0.012	0.0018	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-168	0.72	C153 B	0.024	0.0026	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-169	0.0072	J	0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-170	0.25		0.012	0.0013	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-171	0.066	q C	0.024	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-172	0.038		0.012	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-173	0.066	q C171	0.024	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-174	0.26		0.012	0.0010	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-175	0.0089	J	0.012	0.0010	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-176	0.027	q	0.012	0.00076	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-177	0.15		0.012	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-178	0.057		0.012	0.0011	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-179	0.12		0.012	0.00080	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-180	0.53	C	0.024	0.00084	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-181	ND		0.012	0.0010	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-182	0.0038	J q	0.012	0.00097	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-183	0.16	C	0.024	0.00098	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-184	ND		0.012	0.00082	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-185	0.16	C183	0.024	0.00098	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-186	ND		0.012	0.00080	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-187	0.34		0.012	0.00093	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-188	ND		0.012	0.00066	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-189	0.0070	J	0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-190	0.044		0.012	0.00073	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-191	0.0088	J	0.012	0.00076	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-192	ND		0.012	0.00084	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-193	0.53	C180	0.024	0.00084	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-194	0.15		0.012	0.0019	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-195	0.059		0.012	0.0020	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-196	0.062		0.012	0.00058	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S227

Lab Sample ID: 580-77301-10

Date Collected: 05/14/18 16:50

Matrix: Solid

Date Received: 05/15/18 13:15

Percent Solids: 40.4

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	0.0054	J q	0.012	0.00044	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-198	0.16	C	0.024	0.00059	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-199	0.16	C198	0.024	0.00059	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-200	0.018		0.012	0.00040	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-201	0.019		0.012	0.00041	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-202	0.036		0.012	0.00045	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-203	0.093	q	0.012	0.00053	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-204	ND		0.012	0.00045	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-205	0.0057	J q	0.012	0.0016	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-206	0.12		0.012	0.0037	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-207	0.011	J	0.012	0.0025	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-208	0.033		0.012	0.0024	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1
PCB-209	0.10		0.012	0.00054	ng/g	☼	05/29/18 09:29	06/08/18 21:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	67		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-3L	70		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-4L	66		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-15L	73		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-19L	77		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-37L	84		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-54L	86		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-77L	82		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-81L	82		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-104L	76		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-105L	87		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-114L	88		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-118L	88		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-123L	86		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-126L	84		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-155L	78		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-156L	81	C	30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-157L	81	C156	30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-167L	87		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-169L	80		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-170L	81		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-188L	98		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-189L	100		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-202L	102		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-205L	75		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-206L	69		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-208L	81		30 - 140	05/29/18 09:29	06/08/18 21:02	1
PCB-209L	61		30 - 140	05/29/18 09:29	06/08/18 21:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	92		40 - 125	05/29/18 09:29	06/08/18 21:02	1
PCB-111L	89		40 - 125	05/29/18 09:29	06/08/18 21:02	1
PCB-178L	98		40 - 125	05/29/18 09:29	06/08/18 21:02	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-RB-VV-180514

Lab Sample ID: 580-77301-11

Date Collected: 05/14/18 17:30

Matrix: Water

Date Received: 05/15/18 13:15

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.041	0.00053	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-2	ND		0.041	0.00060	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-3	0.0031	J B q	0.041	0.00066	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-4	ND		0.061	0.011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-5	ND		0.041	0.0090	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-6	ND		0.041	0.0079	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-7	ND		0.041	0.0081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-8	ND		0.061	0.0073	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-9	ND		0.041	0.0083	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-10	ND		0.041	0.0089	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-11	0.048	J B	0.061	0.0078	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-12	ND	C	0.081	0.0081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-13	ND	C12	0.081	0.0081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-14	ND		0.041	0.0068	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-15	ND		0.041	0.0084	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-16	ND		0.041	0.0014	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-17	ND		0.041	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-18	0.0076	J C q	0.081	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-19	ND		0.041	0.0015	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-20	0.0057	J C B q	0.081	0.00080	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-21	ND	C	0.081	0.00078	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-22	0.0017	J B q	0.041	0.00082	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-23	ND		0.041	0.00081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-24	ND		0.041	0.0010	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-25	ND		0.041	0.00074	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-26	ND	C	0.081	0.00079	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-27	ND		0.041	0.00090	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-28	0.0057	J B C20 q	0.081	0.00080	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-29	ND	C26	0.081	0.00079	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-30	0.0076	J C18 q	0.081	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-31	0.0045	J q	0.041	0.00078	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-32	0.0038	J q	0.041	0.00086	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-33	ND	C21	0.081	0.00078	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-34	ND		0.041	0.00084	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-35	ND		0.041	0.00082	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-36	ND		0.041	0.00079	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-37	ND		0.041	0.00081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-38	ND		0.041	0.00085	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-39	ND		0.041	0.00076	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-40	ND	C	0.12	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-41	ND	C40	0.12	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-42	ND		0.041	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-43	ND	C	0.081	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-44	0.010	J C B q	0.12	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-45	ND	C	0.081	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-46	ND		0.041	0.0016	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-47	0.010	J B C44 q	0.12	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-48	ND		0.041	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-49	ND	C	0.081	0.0010	ng/L		05/30/18 13:51	06/10/18 19:26	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-RB-VV-180514

Lab Sample ID: 580-77301-11

Date Collected: 05/14/18 17:30

Matrix: Water

Date Received: 05/15/18 13:15

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-50	ND	C	0.081	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-51	ND	C45	0.081	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-52	ND		0.041	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-53	ND	C50	0.081	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-54	ND		0.041	0.000083	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-55	ND		0.041	0.00091	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-56	ND		0.041	0.00091	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-57	ND		0.041	0.00093	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-58	ND		0.041	0.00094	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-59	ND	C	0.12	0.00089	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-60	ND		0.041	0.00093	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-61	0.0052	J C q	0.16	0.00087	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-62	ND	C59	0.12	0.00089	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-63	ND		0.041	0.00085	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-64	0.0025	J q	0.041	0.00084	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-65	0.010	J B C44 q	0.12	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-66	ND		0.041	0.00087	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-67	ND		0.041	0.00080	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-68	ND		0.041	0.00082	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-69	ND	C49	0.081	0.0010	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-70	0.0052	J C61 q	0.16	0.00087	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-71	ND	C40	0.12	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-72	ND		0.041	0.00091	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-73	ND	C43	0.081	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-74	0.0052	J C61 q	0.16	0.00087	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-75	ND	C59	0.12	0.00089	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-76	0.0052	J C61 q	0.16	0.00087	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-77	ND		0.041	0.00089	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-78	ND		0.041	0.00094	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-79	ND		0.041	0.00081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-80	ND		0.041	0.00080	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-81	ND		0.041	0.00085	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-82	ND		0.041	0.00061	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-83	ND	C	0.081	0.00056	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-84	ND		0.041	0.00062	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-85	ND	C	0.12	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-86	ND	C	0.24	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-87	ND	C86	0.24	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-88	ND	C	0.081	0.00055	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-89	ND		0.041	0.00060	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-90	ND	C	0.12	0.00046	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-91	ND	C88	0.081	0.00055	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-92	ND		0.041	0.00052	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-93	ND	C	0.081	0.00053	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-94	ND		0.041	0.00060	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-95	0.0058	J	0.041	0.00058	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-96	ND		0.041	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-97	ND	C86	0.24	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-98	ND	C	0.081	0.00051	ng/L		05/30/18 13:51	06/10/18 19:26	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-RB-VV-180514

Lab Sample ID: 580-77301-11

Date Collected: 05/14/18 17:30

Matrix: Water

Date Received: 05/15/18 13:15

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-99	ND	C83	0.081	0.00056	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-100	ND	C93	0.081	0.00053	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-101	ND	C90	0.12	0.00046	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-102	ND	C98	0.081	0.00051	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-103	ND		0.041	0.00053	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-104	ND		0.041	0.00040	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-105	ND		0.041	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-106	ND		0.041	0.00076	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-107	ND		0.041	0.00081	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-108	ND	C	0.081	0.00078	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-109	ND	C86	0.24	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-110	0.0048	J C q	0.081	0.00038	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-111	ND		0.041	0.00037	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-112	ND		0.041	0.00039	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-113	ND	C90	0.12	0.00046	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-114	ND		0.041	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-115	0.0048	J C110 q	0.081	0.00038	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-116	ND	C85	0.12	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-117	ND	C85	0.12	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-118	0.0023	J	0.041	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-119	ND	C86	0.24	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-120	ND		0.041	0.00038	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-121	ND		0.041	0.00039	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-122	ND		0.041	0.00088	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-123	ND		0.041	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-124	ND	C108	0.081	0.00078	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-125	ND	C86	0.24	0.00045	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-126	ND		0.041	0.00033	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-127	ND		0.041	0.00076	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-128	ND	C	0.081	0.0026	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-129	ND	C	0.16	0.0027	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-130	ND		0.041	0.0036	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-131	ND		0.041	0.0037	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-132	ND		0.041	0.0035	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-133	ND		0.041	0.0034	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-134	ND	C	0.081	0.0035	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-135	ND	C	0.081	0.00049	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-136	ND		0.041	0.00035	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-137	ND		0.041	0.0031	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-138	ND	C129	0.16	0.0027	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-139	ND	C	0.081	0.0030	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-140	ND	C139	0.081	0.0030	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-141	ND		0.041	0.0032	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-142	ND		0.041	0.0034	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-143	ND	C134	0.081	0.0035	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-144	ND		0.041	0.00044	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-145	ND		0.041	0.00034	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-146	ND		0.041	0.0030	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-147	ND	C	0.081	0.0034	ng/L		05/30/18 13:51	06/10/18 19:26	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-RB-VV-180514

Lab Sample ID: 580-77301-11

Date Collected: 05/14/18 17:30

Matrix: Water

Date Received: 05/15/18 13:15

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-148	ND		0.041	0.00047	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-149	ND	C147	0.081	0.0034	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-150	ND		0.041	0.00032	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-151	ND	C135	0.081	0.00049	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-152	ND		0.041	0.00035	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-153	ND	C	0.081	0.0024	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-154	ND		0.041	0.00038	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-155	ND		0.041	0.00032	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-156	ND	C	0.081	0.0030	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-157	ND	C156	0.081	0.0030	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-158	ND		0.041	0.0021	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-159	ND		0.041	0.0023	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-160	ND	C129	0.16	0.0027	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-161	ND		0.041	0.0022	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-162	ND		0.041	0.0022	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-163	ND	C129	0.16	0.0027	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-164	ND		0.041	0.0024	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-165	ND		0.041	0.0025	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-166	ND	C128	0.081	0.0026	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-167	ND		0.041	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-168	ND	C153	0.081	0.0024	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-169	ND		0.041	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-170	ND		0.041	0.0025	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-171	ND	C	0.081	0.0024	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-172	ND		0.041	0.0024	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-173	ND	C171	0.081	0.0024	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-174	ND		0.041	0.0022	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-175	ND		0.041	0.0022	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-176	ND		0.041	0.0016	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-177	ND		0.041	0.0023	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-178	ND		0.041	0.0023	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-179	ND		0.041	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-180	ND	C	0.081	0.0018	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-181	ND		0.041	0.0022	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-182	ND		0.041	0.0021	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-183	ND	C	0.081	0.0021	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-184	ND		0.041	0.0018	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-185	ND	C183	0.081	0.0021	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-186	ND		0.041	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-187	ND		0.041	0.0020	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-188	ND		0.041	0.0015	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-189	ND		0.041	0.0022	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-190	ND		0.041	0.0016	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-191	ND		0.041	0.0016	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-192	ND		0.041	0.0018	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-193	ND	C180	0.081	0.0018	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-194	ND		0.041	0.0046	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-195	ND		0.041	0.0051	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-196	ND		0.041	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-RB-VV-180514

Lab Sample ID: 580-77301-11

Date Collected: 05/14/18 17:30

Matrix: Water

Date Received: 05/15/18 13:15

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

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-197	ND		0.041	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-198	ND	C	0.081	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-199	ND	C198	0.081	0.0017	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-200	ND		0.041	0.0011	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-201	ND		0.041	0.0012	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-202	ND		0.041	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-203	ND		0.041	0.0015	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-204	ND		0.041	0.0013	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-205	ND		0.041	0.0039	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-206	ND		0.041	0.0054	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-207	ND		0.041	0.0036	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-208	ND		0.041	0.0035	ng/L		05/30/18 13:51	06/10/18 19:26	1
PCB-209	ND		0.041	0.00031	ng/L		05/30/18 13:51	06/10/18 19:26	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-1L	81		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-3L	81		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-4L	80		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-15L	82		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-19L	84		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-37L	98		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-54L	88		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-77L	100		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-81L	99		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-104L	72		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-105L	91		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-114L	89		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-118L	92		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-123L	89		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-126L	699	* q	30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-155L	79		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-156L	91	C	30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-157L	91	C156	30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-167L	93		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-169L	96		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-170L	84		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-188L	86		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-189L	95		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-202L	93		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-205L	72		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-206L	72		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-208L	80		30 - 140				05/30/18 13:51	06/10/18 19:26	1
PCB-209L	66		30 - 140				05/30/18 13:51	06/10/18 19:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
PCB-28L	106		40 - 125				05/30/18 13:51	06/10/18 19:26	1
PCB-111L	105		40 - 125				05/30/18 13:51	06/10/18 19:26	1
PCB-178L	98		40 - 125				05/30/18 13:51	06/10/18 19:26	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20611/17-B

Matrix: Solid

Analysis Batch: 21026

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20611

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.010	0.00048	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-2	ND		0.010	0.00058	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-3	ND		0.010	0.00071	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-4	ND		0.020	0.0083	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-5	ND		0.010	0.0074	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-6	ND		0.010	0.0065	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-7	ND		0.010	0.0067	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-8	ND		0.020	0.0060	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-9	ND		0.010	0.0068	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-10	ND		0.010	0.0073	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-11	ND		0.020	0.0064	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-12	ND	C	0.020	0.0066	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-13	ND	C12	0.020	0.0066	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-14	ND		0.010	0.0056	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-15	ND		0.010	0.0076	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-16	ND		0.010	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-17	ND		0.010	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-18	ND	C	0.020	0.00028	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-19	ND		0.010	0.00039	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-20	0.00176	J C q	0.020	0.00044	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-21	0.00189	J C q	0.020	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-22	ND		0.010	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-23	ND		0.010	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-24	ND		0.010	0.00027	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-25	ND		0.010	0.00041	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-26	ND	C	0.020	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-27	ND		0.010	0.00023	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-28	0.00176	J C20 q	0.020	0.00044	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-29	ND	C26	0.020	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-30	ND	C18	0.020	0.00028	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-31	0.00191	J	0.020	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-32	ND		0.010	0.00022	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-33	0.00189	J C21 q	0.020	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-34	ND		0.010	0.00047	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-35	ND		0.010	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-36	ND		0.010	0.00044	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-37	ND		0.010	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-38	ND		0.010	0.00047	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-39	ND		0.010	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-40	ND	C	0.030	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-41	ND	C40	0.030	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-42	ND		0.010	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-43	ND	C	0.020	0.00048	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-44	0.00601	J C	0.030	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-45	ND	C	0.020	0.00054	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-46	ND		0.010	0.00065	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-47	0.00601	J C44	0.030	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-48	ND		0.010	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20611/17-B

Matrix: Solid

Analysis Batch: 21026

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20611

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	ND	C	0.020	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-50	ND	C	0.020	0.00050	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-51	ND	C45	0.020	0.00054	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-52	ND		0.010	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-53	ND	C50	0.020	0.00050	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-54	ND		0.010	0.000070	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-55	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-56	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-57	ND		0.010	0.00038	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-58	ND		0.010	0.00038	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-59	ND	C	0.030	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-60	ND		0.010	0.00038	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-61	0.00250	J C	0.040	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-62	ND	C59	0.030	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-63	ND		0.010	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-64	ND		0.010	0.00034	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-65	0.00601	J C44	0.030	0.00045	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-66	ND		0.010	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-67	ND		0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-68	0.00216	J q	0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-69	ND	C49	0.020	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-70	0.00250	J C61	0.040	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-71	ND	C40	0.030	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-72	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-73	ND	C43	0.020	0.00048	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-74	0.00250	J C61	0.040	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-75	ND	C59	0.030	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-76	0.00250	J C61	0.040	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-77	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-78	ND		0.010	0.00038	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-79	ND		0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-80	ND		0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-81	ND		0.010	0.00034	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-82	ND		0.010	0.00056	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-83	ND	C	0.020	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-84	ND		0.010	0.00057	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-85	ND	C	0.030	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-86	ND	C	0.060	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-87	ND	C86	0.060	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-88	ND	C	0.020	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-89	ND		0.010	0.00055	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-90	0.00200	J C	0.030	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-91	ND	C88	0.020	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-92	ND		0.010	0.00048	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-93	ND	C	0.020	0.00049	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-94	ND		0.010	0.00055	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-95	ND		0.010	0.00053	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-96	ND		0.010	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20611/17-B

Matrix: Solid

Analysis Batch: 21026

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20611

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	ND	C86	0.060	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-98	ND	C	0.020	0.00047	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-99	ND	C83	0.020	0.00051	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-100	ND	C93	0.020	0.00049	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-101	0.00200	J C90	0.030	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-102	ND	C98	0.020	0.00047	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-103	ND		0.010	0.00049	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-104	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-105	ND		0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-106	ND		0.010	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-107	ND		0.010	0.00038	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-108	ND	C	0.020	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-109	ND	C86	0.060	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-110	ND	C	0.020	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-111	ND		0.010	0.00034	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-112	ND		0.010	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-113	0.00200	J C90	0.030	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-114	ND		0.010	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-115	ND	C110	0.020	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-116	ND	C85	0.030	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-117	ND	C85	0.030	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-118	0.000928	J q	0.010	0.00034	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-119	ND	C86	0.060	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-120	ND		0.010	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-121	ND		0.010	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-122	ND		0.010	0.00041	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-123	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-124	ND	C108	0.020	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-125	ND	C86	0.060	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-126	ND		0.010	0.00038	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-127	ND		0.010	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-128	ND	C	0.020	0.00031	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-129	ND	C	0.040	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-130	ND		0.010	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-131	ND		0.010	0.00043	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-132	ND		0.010	0.00041	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-133	ND		0.010	0.00039	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-134	ND	C	0.020	0.00041	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-135	ND	C	0.020	0.00016	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-136	ND		0.010	0.00011	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-137	ND		0.010	0.00036	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-138	ND	C129	0.040	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-139	ND	C	0.020	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-140	ND	C139	0.020	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-141	ND		0.010	0.00037	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-142	ND		0.010	0.00039	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-143	ND	C134	0.020	0.00041	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-144	ND		0.010	0.00014	ng/g		05/24/18 12:00	06/08/18 00:37	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20611/17-B

Matrix: Solid

Analysis Batch: 21026

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20611

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	ND		0.010	0.00011	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-146	ND		0.010	0.00035	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-147	0.000729	J C q	0.020	0.00040	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-148	ND		0.010	0.00015	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-149	0.000729	J C147 q	0.020	0.00040	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-150	ND		0.010	0.00010	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-151	ND	C135	0.020	0.00016	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-152	ND		0.010	0.00011	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-153	ND	C	0.020	0.00028	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-154	ND		0.010	0.00012	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-155	ND		0.010	0.00010	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-156	0.000806	J C q	0.020	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-157	0.000806	J C156 q	0.020	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-158	ND		0.010	0.00025	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-159	ND		0.010	0.00026	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-160	ND	C129	0.040	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-161	ND		0.010	0.00026	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-162	ND		0.010	0.00026	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-163	ND	C129	0.040	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-164	ND		0.010	0.00028	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-165	ND		0.010	0.00030	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-166	ND	C128	0.020	0.00031	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-167	ND		0.010	0.00020	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-168	ND	C153	0.020	0.00028	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-169	0.000998	J	0.010	0.00021	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-170	ND		0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-171	ND	C	0.020	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-172	ND		0.010	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-173	ND	C171	0.020	0.00033	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-174	ND		0.010	0.00031	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-175	ND		0.010	0.00030	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-176	ND		0.010	0.00022	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-177	0.00222	J q	0.010	0.00031	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-178	ND		0.010	0.00032	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-179	0.00171	J	0.010	0.00024	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-180	ND	C	0.020	0.00025	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-181	ND		0.010	0.00030	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-182	ND		0.010	0.00028	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-183	ND	C	0.020	0.00029	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-184	ND		0.010	0.00024	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-185	ND	C183	0.020	0.00029	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-186	ND		0.010	0.00024	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-187	ND		0.010	0.00027	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-188	ND		0.010	0.00021	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-189	ND		0.010	0.00027	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-190	ND		0.010	0.00021	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-191	ND		0.010	0.00022	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-192	ND		0.010	0.00025	ng/g		05/24/18 12:00	06/08/18 00:37	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20611/17-B

Matrix: Solid

Analysis Batch: 21026

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20611

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	ND	C180	0.020	0.00025	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-194	ND		0.010	0.00050	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-195	ND		0.010	0.00054	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-196	ND		0.010	0.000089	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-197	ND		0.010	0.000068	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-198	ND	C	0.020	0.000091	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-199	ND	C198	0.020	0.000091	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-200	ND		0.010	0.000061	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-201	ND		0.010	0.000062	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-202	ND		0.010	0.000070	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-203	ND		0.010	0.000081	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-204	ND		0.010	0.000068	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-205	ND		0.010	0.00042	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-206	ND		0.010	0.0013	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-207	ND		0.010	0.00094	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-208	ND		0.010	0.00098	ng/g		05/24/18 12:00	06/08/18 00:37	1
PCB-209	ND		0.010	0.00010	ng/g		05/24/18 12:00	06/08/18 00:37	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	56		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-3L	54		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-4L	53		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-15L	52		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-19L	61		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-37L	66		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-54L	66		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-77L	69		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-81L	66		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-104L	60		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-105L	77		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-114L	78		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-118L	77		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-123L	73		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-126L	74		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-155L	67		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-156L	79	C	30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-157L	79	C156	30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-167L	81		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-169L	85		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-170L	74		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-188L	75		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-189L	84		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-202L	87		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-205L	72		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-206L	74		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-208L	71		30 - 140	05/24/18 12:00	06/08/18 00:37	1
PCB-209L	73		30 - 140	05/24/18 12:00	06/08/18 00:37	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20611/17-B

Matrix: Solid

Analysis Batch: 21026

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20611

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	87		40 - 125	05/24/18 12:00	06/08/18 00:37	1
PCB-111L	82		40 - 125	05/24/18 12:00	06/08/18 00:37	1
PCB-178L	81		40 - 125	05/24/18 12:00	06/08/18 00:37	1

Lab Sample ID: LCS 140-20611/18-B

Matrix: Solid

Analysis Batch: 20999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	0.500	0.425		ng/g		85	50 - 150
PCB-3	0.500	0.470		ng/g		94	50 - 150
PCB-4	0.500	0.513		ng/g		103	50 - 150
PCB-15	0.500	0.580		ng/g		116	50 - 150
PCB-19	0.500	0.589		ng/g		118	50 - 150
PCB-37	0.500	0.525		ng/g		105	50 - 150
PCB-54	0.500	0.514		ng/g		103	50 - 150
PCB-77	0.500	0.535		ng/g		107	50 - 150
PCB-81	0.500	0.502		ng/g		100	50 - 150
PCB-104	0.500	0.556		ng/g		111	50 - 150
PCB-105	0.500	0.538		ng/g		108	50 - 150
PCB-114	0.500	0.589		ng/g		118	50 - 150
PCB-118	0.500	0.576		ng/g		115	50 - 150
PCB-123	0.500	0.582		ng/g		116	50 - 150
PCB-126	0.500	0.586		ng/g		117	50 - 150
PCB-155	0.500	0.500		ng/g		100	50 - 150
PCB-156	1.00	1.09	C	ng/g		109	50 - 150
PCB-157	1.00	1.09	C156	ng/g		109	50 - 150
PCB-167	0.500	0.553		ng/g		111	50 - 150
PCB-169	0.500	0.516		ng/g		103	50 - 150
PCB-188	0.500	0.560		ng/g		112	50 - 150
PCB-189	0.500	0.533		ng/g		107	50 - 150
PCB-202	0.500	0.481		ng/g		96	50 - 150
PCB-205	0.500	0.604		ng/g		121	50 - 150
PCB-206	0.500	0.527		ng/g		105	50 - 150
PCB-208	0.500	0.543		ng/g		109	50 - 150
PCB-209	0.500	0.540		ng/g		108	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	61		30 - 140
PCB-3L	60		30 - 140
PCB-4L	55		30 - 140
PCB-15L	59		30 - 140
PCB-19L	62		30 - 140
PCB-37L	74		30 - 140
PCB-54L	70		30 - 140
PCB-77L	81		30 - 140
PCB-81L	80		30 - 140
PCB-104L	66		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: LCS 140-20611/18-B

Matrix: Solid

Analysis Batch: 20999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20611

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-105L	85		30 - 140
PCB-114L	83		30 - 140
PCB-118L	81		30 - 140
PCB-123L	78		30 - 140
PCB-126L	81		30 - 140
PCB-155L	75		30 - 140
PCB-156L	94	C	30 - 140
PCB-157L	94	C156	30 - 140
PCB-167L	93		30 - 140
PCB-169L	99		30 - 140
PCB-170L	84		30 - 140
PCB-188L	80		30 - 140
PCB-189L	91		30 - 140
PCB-202L	92		30 - 140
PCB-205L	79		30 - 140
PCB-206L	78		30 - 140
PCB-208L	77		30 - 140
PCB-209L	77		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	95		40 - 125
PCB-111L	94		40 - 125
PCB-178L	89		40 - 125

Lab Sample ID: LCSD 140-20611/19-B

Matrix: Solid

Analysis Batch: 20999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20611

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1	0.500	0.328	q G	ng/g		66	50 - 150	26	50
PCB-3	0.500	0.482		ng/g		96	50 - 150	3	50
PCB-4	0.500	0.605	G	ng/g		121	50 - 150	16	50
PCB-15	0.500	0.632	G	ng/g		126	50 - 150	9	50
PCB-19	0.500	0.615		ng/g		123	50 - 150	4	50
PCB-37	0.500	0.513		ng/g		103	50 - 150	2	50
PCB-54	0.500	0.496		ng/g		99	50 - 150	4	50
PCB-77	0.500	0.524	G	ng/g		105	50 - 150	2	50
PCB-81	0.500	0.512		ng/g		102	50 - 150	2	50
PCB-104	0.500	0.577		ng/g		115	50 - 150	4	50
PCB-105	0.500	0.536		ng/g		107	50 - 150	0	50
PCB-114	0.500	0.592		ng/g		118	50 - 150	0	50
PCB-118	0.500	0.554		ng/g		111	50 - 150	4	50
PCB-123	0.500	0.607		ng/g		121	50 - 150	4	50
PCB-126	0.500	0.586		ng/g		117	50 - 150	0	50
PCB-155	0.500	0.516		ng/g		103	50 - 150	3	50
PCB-156	1.00	1.09	C	ng/g		109	50 - 150	0	50
PCB-157	1.00	1.09	C156	ng/g		109	50 - 150	0	50
PCB-167	0.500	0.581		ng/g		116	50 - 150	5	50

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: LCSD 140-20611/19-B

Matrix: Solid

Analysis Batch: 20999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20611

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-169	0.500	0.507		ng/g		101	50 - 150	2	50
PCB-188	0.500	0.558		ng/g		112	50 - 150	0	50
PCB-189	0.500	0.542		ng/g		108	50 - 150	2	50
PCB-202	0.500	0.482		ng/g		96	50 - 150	0	50
PCB-205	0.500	0.602		ng/g		120	50 - 150	0	50
PCB-206	0.500	0.553		ng/g		111	50 - 150	5	50
PCB-208	0.500	0.542		ng/g		108	50 - 150	0	50
PCB-209	0.500	0.552		ng/g		110	50 - 150	2	50

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
PCB-1L	0.9	q *	30 - 140
PCB-3L	8	*	30 - 140
PCB-4L	10	*	30 - 140
PCB-15L	44		30 - 140
PCB-19L	34		30 - 140
PCB-37L	73		30 - 140
PCB-54L	57		30 - 140
PCB-77L	78		30 - 140
PCB-81L	77		30 - 140
PCB-104L	62		30 - 140
PCB-105L	88		30 - 140
PCB-114L	87		30 - 140
PCB-118L	86		30 - 140
PCB-123L	82		30 - 140
PCB-126L	85		30 - 140
PCB-155L	77		30 - 140
PCB-156L	92	C	30 - 140
PCB-157L	92	C156	30 - 140
PCB-167L	88		30 - 140
PCB-169L	97		30 - 140
PCB-170L	86		30 - 140
PCB-188L	85		30 - 140
PCB-189L	90		30 - 140
PCB-202L	96		30 - 140
PCB-205L	78		30 - 140
PCB-206L	78		30 - 140
PCB-208L	76		30 - 140
PCB-209L	76		30 - 140

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
PCB-28L	102		40 - 125
PCB-111L	93		40 - 125
PCB-178L	92		40 - 125

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20706/16-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20706

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1	ND		0.010	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-2	ND		0.010	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-3	ND		0.010	0.00021	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-4	ND		0.020	0.0072	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-5	ND		0.010	0.0064	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-6	ND		0.010	0.0056	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-7	ND		0.010	0.0058	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-8	ND		0.020	0.0052	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-9	ND		0.010	0.0059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-10	ND		0.010	0.0063	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-11	ND		0.020	0.0055	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-12	ND	C	0.020	0.0057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-13	ND	C12	0.020	0.0057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-14	ND		0.010	0.0048	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-15	ND		0.010	0.0065	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-16	ND		0.010	0.00063	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-17	ND		0.010	0.00056	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-18	ND	C	0.020	0.00050	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-19	ND		0.010	0.00069	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-20	ND	C	0.020	0.00059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-21	ND	C	0.020	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-22	ND		0.010	0.00060	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-23	ND		0.010	0.00059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-24	ND		0.010	0.00047	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-25	ND		0.010	0.00054	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-26	ND	C	0.020	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-27	ND		0.010	0.00041	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-28	ND	C20	0.020	0.00059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-29	ND	C26	0.020	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-30	ND	C18	0.020	0.00050	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-31	ND		0.020	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-32	ND		0.010	0.00039	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-33	ND	C21	0.020	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-34	ND		0.010	0.00062	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-35	ND		0.010	0.00060	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-36	ND		0.010	0.00058	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-37	ND		0.010	0.00060	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-38	ND		0.010	0.00062	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-39	ND		0.010	0.00056	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-40	ND	C	0.030	0.00088	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-41	ND	C40	0.030	0.00088	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-42	ND		0.010	0.00088	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-43	ND	C	0.020	0.00082	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-44	ND	C	0.030	0.00078	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-45	ND	C	0.020	0.00092	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-46	ND		0.010	0.0011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-47	ND	C44	0.030	0.00078	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-48	ND		0.010	0.00088	ng/g		05/29/18 09:29	06/08/18 16:56	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20706/16-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20706

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	ND	C	0.020	0.00072	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-50	ND	C	0.020	0.00085	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-51	ND	C45	0.020	0.00092	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-52	ND		0.010	0.00087	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-53	ND	C50	0.020	0.00085	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-54	ND		0.010	0.000038	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-55	ND		0.010	0.00064	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-56	ND		0.010	0.00064	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-57	ND		0.010	0.00065	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-58	ND		0.010	0.00066	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-59	ND	C	0.030	0.00062	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-60	ND		0.010	0.00065	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-61	ND	C	0.040	0.00061	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-62	ND	C59	0.030	0.00062	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-63	ND		0.010	0.00059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-64	ND		0.010	0.00059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-65	ND	C44	0.030	0.00078	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-66	ND		0.010	0.00061	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-67	ND		0.010	0.00056	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-68	ND		0.010	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-69	ND	C49	0.020	0.00072	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-70	ND	C61	0.040	0.00061	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-71	ND	C40	0.030	0.00088	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-72	ND		0.010	0.00064	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-73	ND	C43	0.020	0.00082	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-74	ND	C61	0.040	0.00061	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-75	ND	C59	0.030	0.00062	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-76	ND	C61	0.040	0.00061	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-77	ND		0.010	0.00063	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-78	ND		0.010	0.00066	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-79	ND		0.010	0.00057	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-80	ND		0.010	0.00056	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-81	ND		0.010	0.00059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-82	ND		0.010	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-83	ND	C	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-84	ND		0.010	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-85	0.00118	J C	0.030	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-86	0.00162	J C q	0.060	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-87	0.00162	J C86 q	0.060	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-88	ND	C	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-89	ND		0.010	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-90	ND	C	0.030	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-91	ND	C88	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-92	ND		0.010	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-93	ND	C	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-94	ND		0.010	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-95	ND		0.010	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-96	ND		0.010	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20706/16-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20706

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-97	0.00162	J C86 q	0.060	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-98	ND	C	0.020	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-99	ND	C83	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-100	ND	C93	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-101	ND	C90	0.030	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-102	ND	C98	0.020	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-103	ND		0.010	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-104	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-105	ND		0.010	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-106	ND		0.010	0.00026	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-107	ND		0.010	0.00028	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-108	ND	C	0.020	0.00027	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-109	0.00162	J C86 q	0.060	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-110	ND	C	0.020	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-111	ND		0.010	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-112	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-113	ND	C90	0.030	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-114	ND		0.010	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-115	ND	C110	0.020	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-116	0.00118	J C85	0.030	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-117	0.00118	J C85	0.030	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-118	ND		0.010	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-119	0.00162	J C86 q	0.060	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-120	ND		0.010	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-121	ND		0.010	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-122	ND		0.010	0.00030	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-123	ND		0.010	0.00026	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-124	ND	C108	0.020	0.00027	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-125	0.00162	J C86 q	0.060	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-126	ND		0.010	0.00029	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-127	ND		0.010	0.00026	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-128	ND	C	0.020	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-129	ND	C	0.040	0.00019	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-130	ND		0.010	0.00025	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-131	ND		0.010	0.00026	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-132	ND		0.010	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-133	ND		0.010	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-134	0.000644	J C q	0.020	0.00025	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-135	ND	C	0.020	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-136	ND		0.010	0.00010	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-137	ND		0.010	0.00021	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-138	ND	C129	0.040	0.00019	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-139	ND	C	0.020	0.00021	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-140	ND	C139	0.020	0.00021	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-141	ND		0.010	0.00022	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-142	ND		0.010	0.00023	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-143	0.000644	J C134 q	0.020	0.00025	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-144	ND		0.010	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20706/16-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20706

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-145	0.000633	J	0.010	0.000095	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-146	ND		0.010	0.00021	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-147	ND	C	0.020	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-148	ND		0.010	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-149	ND	C147	0.020	0.00024	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-150	ND		0.010	0.000091	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-151	ND	C135	0.020	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-152	ND		0.010	0.000098	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-153	0.00126	J C	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-154	ND		0.010	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-155	ND		0.010	0.000091	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-156	0.000706	J C q	0.020	0.00019	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-157	0.000706	J C156 q	0.020	0.00019	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-158	ND		0.010	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-159	ND		0.010	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-160	ND	C129	0.040	0.00019	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-161	ND		0.010	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-162	ND		0.010	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-163	ND	C129	0.040	0.00019	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-164	ND		0.010	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-165	ND		0.010	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-166	ND	C128	0.020	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-167	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-168	0.00126	J C153	0.020	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-169	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-170	ND		0.010	0.00018	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-171	ND	C	0.020	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-172	ND		0.010	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-173	ND	C171	0.020	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-174	ND		0.010	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-175	ND		0.010	0.00016	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-176	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-177	ND		0.010	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-178	ND		0.010	0.00017	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-179	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-180	ND	C	0.020	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-181	ND		0.010	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-182	ND		0.010	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-183	ND	C	0.020	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-184	ND		0.010	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-185	ND	C183	0.020	0.00015	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-186	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-187	ND		0.010	0.00014	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-188	ND		0.010	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-189	ND		0.010	0.00030	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-190	ND		0.010	0.00011	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-191	ND		0.010	0.00012	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-192	ND		0.010	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20706/16-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20706

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-193	ND	C180	0.020	0.00013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-194	ND		0.010	0.00033	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-195	ND		0.010	0.00036	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-196	ND		0.010	0.000087	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-197	ND		0.010	0.000066	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-198	ND	C	0.020	0.000088	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-199	ND	C198	0.020	0.000088	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-200	ND		0.010	0.000059	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-201	ND		0.010	0.000060	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-202	ND		0.010	0.000067	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-203	ND		0.010	0.000078	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-204	ND		0.010	0.000066	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-205	ND		0.010	0.00028	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-206	ND		0.010	0.0013	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-207	ND		0.010	0.00092	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-208	ND		0.010	0.00094	ng/g		05/29/18 09:29	06/08/18 16:56	1
PCB-209	ND		0.010	0.000086	ng/g		05/29/18 09:29	06/08/18 16:56	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-1L	80		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-3L	80		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-4L	71		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-15L	70		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-19L	77		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-37L	80		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-54L	85		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-77L	81		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-81L	80		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-104L	75		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-105L	86		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-114L	85		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-118L	86		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-123L	82		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-126L	75		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-155L	84		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-156L	86	C	30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-157L	86	C156	30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-167L	83		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-169L	90		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-170L	82		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-188L	86		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-189L	89		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-202L	94		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-205L	76		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-206L	76		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-208L	73		30 - 140	05/29/18 09:29	06/08/18 16:56	1
PCB-209L	71		30 - 140	05/29/18 09:29	06/08/18 16:56	1

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: MB 140-20706/16-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20706

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
PCB-28L	90		40 - 125	05/29/18 09:29	06/08/18 16:56	1
PCB-111L	91		40 - 125	05/29/18 09:29	06/08/18 16:56	1
PCB-178L	87		40 - 125	05/29/18 09:29	06/08/18 16:56	1

Lab Sample ID: LCS 140-20706/17-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1	0.500	0.448		ng/g		90	50 - 150
PCB-3	0.500	0.481		ng/g		96	50 - 150
PCB-4	0.500	0.496		ng/g		99	50 - 150
PCB-15	0.500	0.616		ng/g		123	50 - 150
PCB-19	0.500	0.569		ng/g		114	50 - 150
PCB-37	0.500	0.518		ng/g		104	50 - 150
PCB-54	0.500	0.493		ng/g		99	50 - 150
PCB-77	0.500	0.517	G	ng/g		103	50 - 150
PCB-81	0.500	0.509		ng/g		102	50 - 150
PCB-104	0.500	0.550		ng/g		110	50 - 150
PCB-105	0.500	0.523		ng/g		105	50 - 150
PCB-114	0.500	0.577		ng/g		115	50 - 150
PCB-118	0.500	0.556		ng/g		111	50 - 150
PCB-123	0.500	0.594		ng/g		119	50 - 150
PCB-126	0.500	0.577		ng/g		115	50 - 150
PCB-155	0.500	0.531		ng/g		106	50 - 150
PCB-156	1.00	1.14	C	ng/g		114	50 - 150
PCB-157	1.00	1.14	C156	ng/g		114	50 - 150
PCB-167	0.500	0.547		ng/g		109	50 - 150
PCB-169	0.500	0.506		ng/g		101	50 - 150
PCB-188	0.500	0.543		ng/g		109	50 - 150
PCB-189	0.500	0.540		ng/g		108	50 - 150
PCB-202	0.500	0.481		ng/g		96	50 - 150
PCB-205	0.500	0.597		ng/g		119	50 - 150
PCB-206	0.500	0.535		ng/g		107	50 - 150
PCB-208	0.500	0.572		ng/g		114	50 - 150
PCB-209	0.500	0.574		ng/g		115	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-1L	83		30 - 140
PCB-3L	80		30 - 140
PCB-4L	72		30 - 140
PCB-15L	74		30 - 140
PCB-19L	79		30 - 140
PCB-37L	88		30 - 140
PCB-54L	88		30 - 140
PCB-77L	91		30 - 140
PCB-81L	88		30 - 140
PCB-104L	72		30 - 140

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: LCS 140-20706/17-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20706

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
PCB-105L	88		30 - 140
PCB-114L	88		30 - 140
PCB-118L	87		30 - 140
PCB-123L	83		30 - 140
PCB-126L	82		30 - 140
PCB-155L	78		30 - 140
PCB-156L	88	C	30 - 140
PCB-157L	88	C156	30 - 140
PCB-167L	89		30 - 140
PCB-169L	94		30 - 140
PCB-170L	83		30 - 140
PCB-188L	88		30 - 140
PCB-189L	90		30 - 140
PCB-202L	96		30 - 140
PCB-205L	76		30 - 140
PCB-206L	74		30 - 140
PCB-208L	74		30 - 140
PCB-209L	68		30 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
PCB-28L	91		40 - 125
PCB-111L	90		40 - 125
PCB-178L	89		40 - 125

Lab Sample ID: LCSD 140-20706/18-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20706

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1	0.500	0.434		ng/g		87	50 - 150	3	50
PCB-3	0.500	0.484		ng/g		97	50 - 150	1	50
PCB-4	0.500	0.507		ng/g		101	50 - 150	2	50
PCB-15	0.500	0.579		ng/g		116	50 - 150	6	50
PCB-19	0.500	0.562		ng/g		112	50 - 150	1	50
PCB-37	0.500	0.520		ng/g		104	50 - 150	0	50
PCB-54	0.500	0.487		ng/g		97	50 - 150	1	50
PCB-77	0.500	0.518	G	ng/g		104	50 - 150	0	50
PCB-81	0.500	0.510		ng/g		102	50 - 150	0	50
PCB-104	0.500	0.556		ng/g		111	50 - 150	1	50
PCB-105	0.500	0.524		ng/g		105	50 - 150	0	50
PCB-114	0.500	0.585		ng/g		117	50 - 150	1	50
PCB-118	0.500	0.560		ng/g		112	50 - 150	1	50
PCB-123	0.500	0.586		ng/g		117	50 - 150	1	50
PCB-126	0.500	0.568		ng/g		114	50 - 150	2	50
PCB-155	0.500	0.517		ng/g		103	50 - 150	3	50
PCB-156	1.00	1.11	C	ng/g		111	50 - 150	3	50
PCB-157	1.00	1.11	C156	ng/g		111	50 - 150	3	50
PCB-167	0.500	0.567		ng/g		113	50 - 150	3	50

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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

Lab Sample ID: LCSD 140-20706/18-B

Matrix: Solid

Analysis Batch: 21037

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20706

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-169	0.500	0.498		ng/g		100	50 - 150	2	50
PCB-188	0.500	0.549		ng/g		110	50 - 150	1	50
PCB-189	0.500	0.538		ng/g		108	50 - 150	0	50
PCB-202	0.500	0.457		ng/g		91	50 - 150	5	50
PCB-205	0.500	0.627		ng/g		125	50 - 150	5	50
PCB-206	0.500	0.505		ng/g		101	50 - 150	6	50
PCB-208	0.500	0.558		ng/g		112	50 - 150	2	50
PCB-209	0.500	0.587		ng/g		117	50 - 150	2	50

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
PCB-1L	90		30 - 140
PCB-3L	85		30 - 140
PCB-4L	79		30 - 140
PCB-15L	77		30 - 140
PCB-19L	83		30 - 140
PCB-37L	85		30 - 140
PCB-54L	88		30 - 140
PCB-77L	83		30 - 140
PCB-81L	82		30 - 140
PCB-104L	81		30 - 140
PCB-105L	89		30 - 140
PCB-114L	86		30 - 140
PCB-118L	87		30 - 140
PCB-123L	85		30 - 140
PCB-126L	82		30 - 140
PCB-155L	84		30 - 140
PCB-156L	87	C	30 - 140
PCB-157L	87	C156	30 - 140
PCB-167L	90		30 - 140
PCB-169L	94		30 - 140
PCB-170L	85		30 - 140
PCB-188L	91		30 - 140
PCB-189L	92		30 - 140
PCB-202L	98		30 - 140
PCB-205L	77		30 - 140
PCB-206L	77		30 - 140
PCB-208L	76		30 - 140
PCB-209L	70		30 - 140

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
PCB-28L	96		40 - 125
PCB-111L	92		40 - 125
PCB-178L	85		40 - 125

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-77301-3

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-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: 580-77301-3

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: 580-77301-3

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: 580-77301-3

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: 580-77301-3

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: 580-77301-3

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: 580-77301-3

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

<i>Isotope Dilution</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
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

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

Lab Chronicle

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S158

Date Collected: 05/14/18 13:15

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-1

Matrix: Solid

Percent Solids: 57.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 02:45	LKM	TAL KNX

Client Sample ID: PDI-SG-S161

Date Collected: 05/14/18 16:30

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-2

Matrix: Solid

Percent Solids: 41.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 03:46	LKM	TAL KNX

Client Sample ID: PDI-SG-S250

Date Collected: 05/14/18 10:40

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-3

Matrix: Solid

Percent Solids: 38.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 04:48	LKM	TAL KNX

Client Sample ID: PDI-SG-S249

Date Collected: 05/14/18 12:00

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-4

Matrix: Solid

Percent Solids: 60.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 05:49	LKM	TAL KNX

Client Sample ID: PDI-SG-S248

Date Collected: 05/14/18 12:50

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-5

Matrix: Solid

Percent Solids: 40.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 06:51	LKM	TAL KNX

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-SG-S247

Date Collected: 05/14/18 14:10

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-6

Matrix: Solid

Percent Solids: 42.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 07:53	LKM	TAL KNX

Client Sample ID: PDI-SG-S246

Date Collected: 05/14/18 15:15

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-7

Matrix: Solid

Percent Solids: 37.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20611	05/24/18 12:00	CLI	TAL KNX
Total/NA	Cleanup	Split			20726	05/29/18 16:02	SMM	TAL KNX
Total/NA	Analysis	1668A		1	21026	06/08/18 08:54	LKM	TAL KNX

Client Sample ID: PDI-SG-S252

Date Collected: 05/14/18 09:45

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-8

Matrix: Solid

Percent Solids: 61.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20706	05/29/18 09:29	BRS	TAL KNX
Total/NA	Cleanup	Split			20748	05/30/18 12:41	EBS	TAL KNX
Total/NA	Analysis	1668A		1	21037	06/08/18 18:59	JMN	TAL KNX

Client Sample ID: PDI-SG-S244

Date Collected: 05/14/18 15:50

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-9

Matrix: Solid

Percent Solids: 39.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20706	05/29/18 09:29	BRS	TAL KNX
Total/NA	Cleanup	Split			20748	05/30/18 12:41	EBS	TAL KNX
Total/NA	Analysis	1668A		1	21037	06/08/18 20:01	JMN	TAL KNX

Client Sample ID: PDI-SG-S227

Date Collected: 05/14/18 16:50

Date Received: 05/15/18 13:15

Lab Sample ID: 580-77301-10

Matrix: Solid

Percent Solids: 40.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			20706	05/29/18 09:29	BRS	TAL KNX
Total/NA	Cleanup	Split			20748	05/30/18 12:41	EBS	TAL KNX
Total/NA	Analysis	1668A		1	21037	06/08/18 21:02	JMN	TAL KNX

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-77301-3

Client Sample ID: PDI-RB-VV-180514

Lab Sample ID: 580-77301-11

Date Collected: 05/14/18 17:30

Matrix: Water

Date Received: 05/15/18 13:15

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 19:26	JMN	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: 580-77301-3

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: 580-77301-3

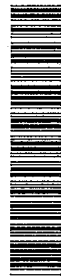
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-77301-1	PDI-SG-S158	Solid	05/14/18 13:15	05/15/18 13:15
580-77301-2	PDI-SG-S161	Solid	05/14/18 16:30	05/15/18 13:15
580-77301-3	PDI-SG-S250	Solid	05/14/18 10:40	05/15/18 13:15
580-77301-4	PDI-SG-S249	Solid	05/14/18 12:00	05/15/18 13:15
580-77301-5	PDI-SG-S248	Solid	05/14/18 12:50	05/15/18 13:15
580-77301-6	PDI-SG-S247	Solid	05/14/18 14:10	05/15/18 13:15
580-77301-7	PDI-SG-S246	Solid	05/14/18 15:15	05/15/18 13:15
580-77301-8	PDI-SG-S252	Solid	05/14/18 09:45	05/15/18 13:15
580-77301-9	PDI-SG-S244	Solid	05/14/18 15:50	05/15/18 13:15
580-77301-10	PDI-SG-S227	Solid	05/14/18 16:50	05/15/18 13:15
580-77301-11	PDI-RB-VV-180514	Water	05/14/18 17:30	05/15/18 13:15

SURFACE SEDIMENT CHAIN OF CUSTODY																		
TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 Ph: 253-922-2310 Fax: 253-922-5047			Client Contact			Project Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010			Site Contact: Jennifer Ray Laboratory Contact: Elaine Walker									
AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1-(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Surface Sediment-SMA			Analysis Turnaround Time Calendar (C) or Work Days (W) ☒ 21 days ☐ Other _____			Carrier: Courier			COC No: 1 of 1 pages									
Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PB Congeners 168A	PCDD/Fs 1613B	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive -20 C	WQ - PCB Congeners 168A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel N/TPH-DX	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SMS310B	Sample Specific Notes:
PDI-SG-S158	5/14/2018	13:15	SS		LS	5		X	X	X	X	X						
PDI-SG-S161	5/14/2018	16:30	SS		LS	5		X	X	X	X	X						
PDI-SG-S250	5/14/2018	10:40	SS		AM	5		X	X	X	X	X						
PDI-SG-S249	5/14/2018	12:00	SS		AM	5		X	X	X	X	X						
PDI-SG-S248	5/14/2018	12:50	SS		AM	5		X	X	X	X	X						
PDI-SG-S247	5/14/2018	14:10	SS		AM	5		X	X	X	X	X						
PDI-SG-S246	5/14/2018	15:15	SS		AM	5		X	X	X	X	X						
PDI-SG-S252	5/14/2018	9:45	SS		AM	5		X	X	X	X	X						
PDI-SG-S244	5/14/2018	15:50	SS		AM	5		X	X	X	X	X						
PDI-SG-S227	5/14/2018	16:50	SS		AM	5		X	X	X	X	X						
PDI-RB-VV-180514	5/14/2018	17:30	W		MT	8							X	X	X	X		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)																		
Special Instructions/QC Requirements & Comments: Separate reports for each lab SMA Study samples - Log in separately from SS Study samples																		
Relinquished by: <i>[Signature]</i> Company: <i>AECOM</i> Date/Time: <i>5/15/18 1240</i> Relinquished by: <i>[Signature]</i> Company: <i>M.E.</i> Date/Time: <i>5/15/18 1315</i> Relinquished by: <i>[Signature]</i> Company: <i>[Blank]</i> Date/Time: <i>[Blank]</i>																		

1.3, 2.7, 2.1

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 Ph: 253-922-2310 Fax: 253-922-5047		SURFACE SEDIMENT CHAIN OF CUSTODY										5/15/2018 COC No. 1							
Client Contact		Project Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010		Site Contact: Jennifer Ray				Laboratory Contact: Elaine-Walker				Carrier: Courier		1 of 1 pages					
AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288		Analysis Turnaround Time Calendar (C) or Work Days (W)		Analysis Turnaround Time ☒ 21 days ☐ Other _____															
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project # 60566335 Study: Surface Sediment-SMA																			
Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 168A	PCDD/Fs 1613B	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SMO510B	Sample Specific Notes:	
PDI-SG-S158	5/14/2018	13:15	SS		LS	5		X	X	X	X	X							
PDI-SG-S161	5/14/2018	16:30	SS		LS	5		X	X	X	X	X							
PDI-SG-S250	5/14/2018	10:40	SS		AM	5		X	X	X	X	X							
PDI-SG-S249	5/14/2018	12:00	SS		AM	5		X	X	X	X	X							
PDI-SG-S248	5/14/2018	12:50	SS		AM	5		X	X	X	X	X							
PDI-SG-S247	5/14/2018	14:10	SS		AM	5		X	X	X	X	X							
PDI-SG-S246	5/14/2018	15:15	SS		AM	5		X	X	X	X	X							
PDI-SG-S252	5/14/2018	9:45	SS		AM	5		X	X	X	X	X							
PDI-SG-S244	5/14/2018	15:50	SS		AM	5		X	X	X	X	X							
PDI-SG-S227	5/14/2018	16:50	SS		AM	5		X	X	X	X	X							
PDI-RB-VV-180514	5/14/2018	17:30	W		MT	8							X	X	X	X	X		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column																			
Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid																			
Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)																			
Sample Disposal ☐ Return To Client ☒ Disposal By Lab ☒ Archive For 12 Months																			
Special Instructions/QC Requirements & Comments: Separate reports for each lab SMA Study samples - Log in seperately from SS Study samples																			
Relinquished by: <i>[Signature]</i>		Company: AECOM		Date/Time: 5/15/18 1240		Received by: <i>[Signature]</i>		Company: M.E.		Date/Time: 5/15/18 1240									
Relinquished by: <i>[Signature]</i>		Company: M.E.		Date/Time: 5/15/18 1315		Received by: <i>[Signature]</i>		Company: TAPOR		Date/Time: 5/15/18 1315									
Relinquished by: <i>[Signature]</i>		Company: TAPOR		Date/Time: 5/16/18 1700		Received by: Tom Blunt		Company: TA-Sea		Date/Time: 5/16/18 0915									

Chain of Custody record



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		COC No:	
Client Contact:		Walker, Elaine M		580-55412.1		Camper Tracking No(s):	
Shipping/Receiving		E-Mail:		State of Origin:		Page:	
Company:		TestAmerica Laboratories, Inc.		Oregon		Page 1 of 2	
Address:		5815 Middlebrook Pike,		Job #:		580-77301-3	
City:		Knoxville		Accreditations Required (See note):		Preservation Codes:	
State:		TN, 37921		Due Date Requested:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH	
Phone:		865-291-3000(Tel) 865-584-4315(Fax)		TAT Requested (days):		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - 73	
Email:		Project #:		PO #:		leachhydrate	
Project Name:		58012120		WO #:		icity)	
Site:		SSOW#:		580-77301 Chain of Custody			

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Weaver, Solid, On-waste/roll, ST=Trace, Analyt)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1668A/1668 P Sox (MOD) 209 PCBs plus Totals	Screen 1668/Screen PCB P-S	1668A/1668 P Sep (MOD) 209 PCBs plus Totals	Analysis Requested	Special Instructions/Note:
PDI-SG-S158 (580-77301-1)	5/14/18	13:15 Pacific	Solid	Solid	X	X	X	X	X		CUSTOMER SEALS INTACT
PDI-SG-S161 (580-77301-2)	5/14/18	16:30 Pacific	Solid	Solid	X	X	X	X	X		RESERVED AT NT 0.1/CTO.1/C
PDI-SG-S250 (580-77301-3)	5/14/18	10:40 Pacific	Solid	Solid	X	X	X	X	X		580 S-17-18
PDI-SG-S249 (580-77301-4)	5/14/18	12:00 Pacific	Solid	Solid	X	X	X	X	X		100% FEAULT
PDI-SG-S248 (580-77301-5)	5/14/18	12:50 Pacific	Solid	Solid	X	X	X	X	X		44230750 3128 PD
PDI-SG-S247 (580-77301-6)	5/14/18	14:10 Pacific	Solid	Solid	X	X	X	X	X		
PDI-SG-S246 (580-77301-7)	5/14/18	15:15 Pacific	Solid	Solid	X	X	X	X	X		
PDI-SG-S252 (580-77301-8)	5/14/18	09:45 Pacific	Solid	Solid	X	X	X	X	X		
PDI-SG-S244 (580-77301-9)	5/14/18	15:50 Pacific	Solid	Solid	X	X	X	X	X		

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

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2		Method of Shipment:	
Empty Kit Relinquished by:		Date:	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No			

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Ver: 09/20/2016

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			☐ Containers, Broken	
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>5648</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	
11. Is the client and project name/# identified?	/			☐ COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			☐ COC No tests on COC	pH test strip lot number: _____
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)	Lot Number: _____
17. Were VOA samples received without headspace?			/	☐ Incorrect Preservative	Exp Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668)	/			☐ Headspace (VOA only) ☐ Residual Chlorine	Analyst: _____
Chlorine test strip lot number: <u>1154 2020/114</u>					Date: _____
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust	Time: _____
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info	
Project #: _____ PM Instructions: _____					

Sample Receiving Associate: [Signature]Date: 5-17-18

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Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-77301-3

Login Number: 77301

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: 580-77301-3

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)
580-77301-1	PDI-SG-S158	49	65	62	80	186 *	91	213 *	93
580-77301-2	PDI-SG-S161	60	69	62	79	79	91	85	93
580-77301-3	PDI-SG-S250	64	70	64	79	74	88	83	91
580-77301-4	PDI-SG-S249	66	71	65	78	73	90	83	92
580-77301-5	PDI-SG-S248	67	73	67	80	76	89	83	91
580-77301-6	PDI-SG-S247	65	72	64	76	74	88	82	95
580-77301-7	PDI-SG-S246	72	79	71	82	78	93	84	98
580-77301-8	PDI-SG-S252	70	79	70	80	87	90	92	84
580-77301-9	PDI-SG-S244	67	75	65	72	77	83	86	85
580-77301-10	PDI-SG-S227	67	70	66	73	77	84	86	82
LCS 140-20611/18-B	Lab Control Sample	61	60	55	59	62	74	70	81
LCS 140-20706/17-B	Lab Control Sample	83	80	72	74	79	88	88	91
LCSD 140-20611/19-B	Lab Control Sample Dup	0.9 q *	8 *	10 *	44	34	73	57	78
LCSD 140-20706/18-B	Lab Control Sample Dup	90	85	79	77	83	85	88	83
MB 140-20611/17-B	Method Blank	56	54	53	52	61	66	66	69
MB 140-20706/16-B	Method Blank	80	80	71	70	77	80	85	81
		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)
580-77301-1	PDI-SG-S158	86	84	97	98	93	92	86	83
580-77301-2	PDI-SG-S161	93	75	90	89	89	88	86	80
580-77301-3	PDI-SG-S250	91	76	90	89	88	87	90	80
580-77301-4	PDI-SG-S249	90	78	90	90	89	88	86	80
580-77301-5	PDI-SG-S248	90	81	90	94	90	87	89	82
580-77301-6	PDI-SG-S247	91	78	92	92	93	91	86	80
580-77301-7	PDI-SG-S246	96	77	93	95	94	91	93	83
580-77301-8	PDI-SG-S252	83	85	95	96	93	93	86	85
580-77301-9	PDI-SG-S244	83	76	87	87	83	84	81	77
580-77301-10	PDI-SG-S227	82	76	87	88	88	86	84	78
LCS 140-20611/18-B	Lab Control Sample	80	66	85	83	81	78	81	75
LCS 140-20706/17-B	Lab Control Sample	88	72	88	88	87	83	82	78
LCSD 140-20611/19-B	Lab Control Sample Dup	77	62	88	87	86	82	85	77
LCSD 140-20706/18-B	Lab Control Sample Dup	82	81	89	86	87	85	82	84
MB 140-20611/17-B	Method Blank	66	60	77	78	77	73	74	67
MB 140-20706/16-B	Method Blank	80	75	86	85	86	82	75	84
		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)
580-77301-1	PDI-SG-S158	94 C	94 C156	95	98	85	89	99	94
580-77301-2	PDI-SG-S161	85 C	85 C156	87	87	83	97	100	98
580-77301-3	PDI-SG-S250	87 C	87 C156	88	89	83	92	95	95
580-77301-4	PDI-SG-S249	88 C	88 C156	90	89	84	95	99	97
580-77301-5	PDI-SG-S248	90 C	90 C156	91	90	85	95	97	100
580-77301-6	PDI-SG-S247	86 C	86 C156	89	85	88	103	96	104
580-77301-7	PDI-SG-S246	89 C	89 C156	91	91	87	98	100	101
580-77301-8	PDI-SG-S252	83 C	83 C156	87	82	80	102	105	100
580-77301-9	PDI-SG-S244	85 C	85 C156	83	82	80	95	97	99
580-77301-10	PDI-SG-S227	81 C	81 C156	87	80	81	98	100	102

TestAmerica Seattle

Isotope Dilution Summary

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

TestAmerica Job ID: 580-77301-3

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

Matrix: Solid

Prep Type: Total/NA

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)
LCS 140-20611/18-B	Lab Control Sample	94 C	94 C156	93	99	84	80	91	92
LCS 140-20706/17-B	Lab Control Sample	88 C	88 C156	89	94	83	88	90	96
LCSD 140-20611/19-B	Lab Control Sample Dup	92 C	92 C156	88	97	86	85	90	96
LCSD 140-20706/18-B	Lab Control Sample Dup	87 C	87 C156	90	94	85	91	92	98
MB 140-20611/17-B	Method Blank	79 C	79 C156	81	85	74	75	84	87
MB 140-20706/16-B	Method Blank	86 C	86 C156	83	90	82	86	89	94

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PCB205L (30-140)	PCB206L (30-140)	PCB208L (30-140)	PCB209L (30-140)
580-77301-1	PDI-SG-S158	77	77	81	74
580-77301-2	PDI-SG-S161	76	71	83	63
580-77301-3	PDI-SG-S250	74	72	81	63
580-77301-4	PDI-SG-S249	78	76	83	65
580-77301-5	PDI-SG-S248	72	70	85	60
580-77301-6	PDI-SG-S247	73	70	82	58
580-77301-7	PDI-SG-S246	78	70	85	62
580-77301-8	PDI-SG-S252	78	73	88	61
580-77301-9	PDI-SG-S244	74	67	82	61
580-77301-10	PDI-SG-S227	75	69	81	61
LCS 140-20611/18-B	Lab Control Sample	79	78	77	77
LCS 140-20706/17-B	Lab Control Sample	76	74	74	68
LCSD 140-20611/19-B	Lab Control Sample Dup	78	78	76	76
LCSD 140-20706/18-B	Lab Control Sample Dup	77	77	76	70
MB 140-20611/17-B	Method Blank	72	74	71	73
MB 140-20706/16-B	Method Blank	76	76	73	71

Surrogate Legend

PCB1L = PCB-1L
PCB3L = PCB-3L
PCB4L = PCB-4L
PCB15L = PCB-15L
PCB19L = PCB-19L
PCB37L = PCB-37L
PCB54L = PCB-54L
PCB77L = PCB-77L
PCB81L = PCB-81L
PCB104L = PCB-104L
PCB105L = PCB-105L
P114L = PCB-114L
PCB118L = PCB-118L
PCB123L = PCB-123L
PCB126L = PCB-126L
PCB155L = PCB-155L
PCB156L = PCB-156L
PCB157L = PCB-157L
PCB167L = PCB-167L
PCB169L = PCB-169L
PCB170L = PCB-170L
PCB188L = PCB-188L

TestAmerica Seattle

Isotope Dilution Summary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77301-3

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)
580-77301-11	PDI-RB-VV-180514	81	81	80	82	84	98	88	100
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)
580-77301-11	PDI-RB-VV-180514	99	72	91	89	92	89	699 * q	79
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)
580-77301-11	PDI-RB-VV-180514	91 C	91 C156	93	96	84	86	95	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)				
580-77301-11	PDI-RB-VV-180514	72	72	80	66				
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
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

TestAmerica Seattle

Isotope Dilution Summary

Client: AECOM

Project/Site: Portland Harbor Pre-Remedial Design

TestAmerica Job ID: 580-77301-3

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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