TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 580-76598-1
Client Project/Site: Portland Harbor Pre-Remedial Design
Revision: 1

For:
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Attn: Karen Mixon

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Authorized for release by:
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Job ID: 580-76598-1

Laboratory: TestAmerica Seattle

Narrative

CASE NARRATIVE
Client: AECOM
Project: Portland Harbor Pre-Remedial Design
Report Number: 580-76598-1

REVISION 1: JULY 23, 2018
This revision was required to have the final, signed COC from the Seattle laboratory added to the report.

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
Twenty-nine samples were received on 4/13/2018 1:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.8º C, 2.1º C, 2.5º C, 3.2º C, 4.1º C and 4.4º C.

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

This report contains results of all analyses performed by TestAmerica Seattle.

Sample collection times were incorrect on the COC for the last two samples. Per email from the client on 04/17/2018, the collection times for these samples should be 4/12/18, not 4/13/18.

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.

DIESEL AND EXTENDED RANGE ORGANICS
Samples PDI-SG-B125-BL1 (580-76598-1), PDI-SG-B124-BL1 (580-76598-2), PDI-SG-B118-BL1 (580-76598-3), PDI-SG-B140-BL1 (580-76598-4), PDI-SG-B139-BL1 (580-76598-5), PDI-SG-B144-BL1 (580-76598-6), PDI-SG-B146-BL1 (580-76598-7), PDI-SG-B147-BL1 (580-76598-8), PDI-SG-B149-BL1 (580-76598-9), PDI-SG-B134-BL1 (580-76598-10), PDI-SG-B121-BL1 (580-76598-11), PDI-SG-B127-BL1 (580-76598-12), PDI-SG-B111-BL1 (580-76598-13), PDI-SG-B113-BL1 (580-76598-14), PDI-SG-B119-BL1 (580-76598-15), PDI-SG-B122-BL1 (580-76598-16), PDI-SG-B122-BL1-D (580-76598-17), PDI-SG-B123-BL1 (580-76598-18), PDI-SG-B126-BL1 (580-76598-19), PDI-SG-B136-BL1 (580-76598-20), PDI-SG-B101-BL1 (580-76598-21), PDI-SG-B105-BL1 (580-76598-22), PDI-SG-B107-BL1 (580-76598-23), PDI-SG-B109-BL1 (580-76598-24), PDI-SG-B116-BL1 (580-76598-25), PDI-SG-B131-BL1 (580-76598-26), PDI-SG-B130-BL1 (580-76598-27), PDI-SG-B120-BL1 (580-76598-28) and PDI-SG-B120-BL1-D (580-76598-29) were analyzed for diesel and extended range organics in accordance with Method NWTPH-Dx. The samples were prepared on 04/25/2018 and analyzed on 04/26/2018, 04/27/2018, 04/30/2018, 05/01/2018 and 05/02/2018.

Surrogate recovery for the following sample was outside control limits: PDI-SG-B146-BL1 (580-76598-7) and PDI-SG-B123-BL1 (580-76598-18). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis were not performed.

Job ID: 580-76598-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Motor Oil (>C24-C36) failed the recovery criteria low for the MS of sample PDI-SG-B101-BL1MS (580-76598-21) in batch 580-272350. Motor Oil (>C24-C36) exceeded the RPD limit for the MSD of sample PDI-SG-B101-BL1MSD (580-76598-21) in batch 580-272350. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Motor Oil (>C24-C36) exceeded the RPD limit for the duplicate of sample PDI-SG-B116-BL1DU (580-76598-25). Sample non-homogeneity is suspected.

The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: PDI-SG-B123-BL1 (580-76598-18).

Samples PDI-SG-B146-BL1 (580-76598-7)[5X], PDI-SG-B123-BL1 (580-76598-18)[20X] and PDI-SG-B130-BL1 (580-76598-27)[2X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

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

METALS (ICPMS)

Samples PDI-SG-B125-BL1 (580-76598-1), PDI-SG-B124-BL1 (580-76598-2), PDI-SG-B118-BL1 (580-76598-3), PDI-SG-B140-BL1 (580-76598-4), PDI-SG-B139-BL1 (580-76598-5), PDI-SG-B144-BL1 (580-76598-6), PDI-SG-B146-BL1 (580-76598-7), PDI-SG-B147-BL1 (580-76598-8), PDI-SG-B149-BL1 (580-76598-9), PDI-SG-B134-BL1 (580-76598-10), PDI-SG-B121-BL1 (580-76598-11), PDI-SG-B127-BL1 (580-76598-12), PDI-SG-B111-BL1 (580-76598-13), PDI-SG-B113-BL1 (580-76598-14), PDI-SG-B119-BL1 (580-76598-15), PDI-SG-B122-BL1 (580-76598-16), PDI-SG-B122-BL1-D (580-76598-17), PDI-SG-B123-BL1 (580-76598-18), PDI-SG-B126-BL1 (580-76598-19), PDI-SG-B136-BL1 (580-76598-20), PDI-SG-B101-BL1 (580-76598-21), PDI-SG-B105-BL1 (580-76598-22), PDI-SG-B107-BL1 (580-76598-23), PDI-SG-B109-BL1 (580-76598-24), PDI-SG-B116-BL1 (580-76598-25), PDI-SG-B131-BL1 (580-76598-26), PDI-SG-B130-BL1 (580-76598-27), PDI-SG-B120-BL1 (580-76598-28) and PDI-SG-B120-BL1-D (580-76598-29) were analyzed for Metals (ICPMS) in accordance with 6020A_LL. The samples were prepared on 04/17/2018 and 04/19/2018 and analyzed on 04/18/2018 and 04/20/2018.

Arsenic, Cadmium, Lead and Zinc exceeded the RPD limit for the MSD of sample PDI-SG-B101-BL1MSD (580-76598-21) in batch 580-271997. The MS/MSD and LCS/LCSD recoveries met acceptance limits.

Copper failed the recovery criteria high for the MSD of sample PDI-SG-B147-BL1MSD (580-76598-8) in batch 580-271773. The MS and associated LCS/LCSD recoveries met acceptance limits.

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

TOTAL MERCURY

Samples PDI-SG-B125-BL1 (580-76598-1), PDI-SG-B124-BL1 (580-76598-2), PDI-SG-B118-BL1 (580-76598-3), PDI-SG-B140-BL1 (580-76598-4), PDI-SG-B139-BL1 (580-76598-5), PDI-SG-B144-BL1 (580-76598-6), PDI-SG-B146-BL1 (580-76598-7), PDI-SG-B147-BL1 (580-76598-8), PDI-SG-B149-BL1 (580-76598-9), PDI-SG-B134-BL1 (580-76598-10), PDI-SG-B121-BL1 (580-76598-11), PDI-SG-B127-BL1 (580-76598-12), PDI-SG-B111-BL1 (580-76598-13), PDI-SG-B113-BL1 (580-76598-14), PDI-SG-B119-BL1 (580-76598-15), PDI-SG-B122-BL1 (580-76598-16), PDI-SG-B122-BL1-D (580-76598-17), PDI-SG-B123-BL1 (580-76598-18), PDI-SG-B126-BL1 (580-76598-19), PDI-SG-B136-BL1 (580-76598-20), PDI-SG-B101-BL1 (580-76598-21), PDI-SG-B105-BL1 (580-76598-22), PDI-SG-B107-BL1 (580-76598-23), PDI-SG-B109-BL1 (580-76598-24), PDI-SG-B116-BL1 (580-76598-25), PDI-SG-B131-BL1 (580-76598-26), PDI-SG-B130-BL1 (580-76598-27), PDI-SG-B120-BL1 (580-76598-28) and PDI-SG-B120-BL1-D (580-76598-29) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 04/27/2018.

Mercury failed the recovery criteria high for the MS of sample PDI-SG-B147-BL1MS (580-76598-8) in batch 580-272528. The MS and associated LCS/LCSD recoveries met acceptance limits.

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

TOTAL ORGANIC CARBON

Job ID: 580-76598-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Samples PDI-SG-B125-BL1 (580-76598-1), PDI-SG-B124-BL1 (580-76598-2), PDI-SG-B118-BL1 (580-76598-3), PDI-SG-B140-BL1 (580-76598-4), PDI-SG-B139-BL1 (580-76598-5), PDI-SG-B144-BL1 (580-76598-6), PDI-SG-B146-BL1 (580-76598-7), PDI-SG-B147-BL1 (580-76598-8), PDI-SG-B149-BL1 (580-76598-9), PDI-SG-B134-BL1 (580-76598-10), PDI-SG-B121-BL1 (580-76598-11), PDI-SG-B127-BL1 (580-76598-12), PDI-SG-B111-BL1 (580-76598-13), PDI-SG-B113-BL1 (580-76598-14), PDI-SG-B119-BL1 (580-76598-15), PDI-SG-B122-BL1 (580-76598-16), PDI-SG-B122-BL1-D (580-76598-17), PDI-SG-B123-BL1 (580-76598-18), PDI-SG-B126-BL1 (580-76598-19), PDI-SG-B136-BL1 (580-76598-20), PDI-SG-B101-BL1 (580-76598-21), PDI-SG-B105-BL1 (580-76598-22), PDI-SG-B107-BL1 (580-76598-23), PDI-SG-B109-BL1 (580-76598-24), PDI-SG-B116-BL1 (580-76598-25), PDI-SG-B131-BL1 (580-76598-26), PDI-SG-B130-BL1 (580-76598-27), PDI-SG-B120-BL1 (580-76598-28) and PDI-SG-B120-BL1-D (580-76598-29) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/20/2018 and 04/24/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 580-272303/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

GRAIN SIZE

Samples PDI-SG-B125-BL1 (580-76598-1), PDI-SG-B124-BL1 (580-76598-2), PDI-SG-B118-BL1 (580-76598-3), PDI-SG-B140-BL1 (580-76598-4), PDI-SG-B139-BL1 (580-76598-5), PDI-SG-B144-BL1 (580-76598-6), PDI-SG-B146-BL1 (580-76598-7), PDI-SG-B147-BL1 (580-76598-8), PDI-SG-B149-BL1 (580-76598-9), PDI-SG-B134-BL1 (580-76598-10), PDI-SG-B121-BL1 (580-76598-11), PDI-SG-B127-BL1 (580-76598-12), PDI-SG-B111-BL1 (580-76598-13), PDI-SG-B113-BL1 (580-76598-14), PDI-SG-B119-BL1 (580-76598-15), PDI-SG-B122-BL1 (580-76598-16), PDI-SG-B123-BL1 (580-76598-18), PDI-SG-B126-BL1 (580-76598-19), PDI-SG-B136-BL1 (580-76598-20), PDI-SG-B101-BL1 (580-76598-21), PDI-SG-B105-BL1 (580-76598-22), PDI-SG-B107-BL1 (580-76598-23), PDI-SG-B109-BL1 (580-76598-24), PDI-SG-B116-BL1 (580-76598-25), PDI-SG-B131-BL1 (580-76598-26), PDI-SG-B130-BL1 (580-76598-27) and PDI-SG-B120-BL1 (580-76598-28) were analyzed for grain size in accordance with ASTM D7928/D6913. The samples were analyzed on 04/23/2018 and 04/25/2018.

Gravel exceeded the RPD limit for the duplicate of sample PDI-SG-B127-BL1DU (580-76598-12).

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

PERCENT SOLIDS

Samples PDI-SG-B125-BL1 (580-76598-1), PDI-SG-B124-BL1 (580-76598-2), PDI-SG-B118-BL1 (580-76598-3), PDI-SG-B140-BL1 (580-76598-4), PDI-SG-B139-BL1 (580-76598-5), PDI-SG-B144-BL1 (580-76598-6), PDI-SG-B146-BL1 (580-76598-7), PDI-SG-B147-BL1 (580-76598-8), PDI-SG-B149-BL1 (580-76598-9), PDI-SG-B134-BL1 (580-76598-10), PDI-SG-B121-BL1 (580-76598-11), PDI-SG-B127-BL1 (580-76598-12), PDI-SG-B111-BL1 (580-76598-13), PDI-SG-B113-BL1 (580-76598-14), PDI-SG-B119-BL1 (580-76598-15), PDI-SG-B122-BL1 (580-76598-16), PDI-SG-B122-BL1-D (580-76598-17), PDI-SG-B123-BL1 (580-76598-18), PDI-SG-B126-BL1 (580-76598-19), PDI-SG-B136-BL1 (580-76598-20), PDI-SG-B101-BL1 (580-76598-21), PDI-SG-B105-BL1 (580-76598-22), PDI-SG-B107-BL1 (580-76598-23), PDI-SG-B109-BL1 (580-76598-24), PDI-SG-B116-BL1 (580-76598-25), PDI-SG-B131-BL1 (580-76598-26), PDI-SG-B130-BL1 (580-76598-27), PDI-SG-B120-BL1 (580-76598-28) and PDI-SG-B120-BL1-D (580-76598-29) were analyzed for percent solids in accordance with ASTM D2216. The samples were analyzed on 04/16/2018 and 04/17/2018.

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

Qualifiers

GC Semi VOA

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.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit

Metals

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.
F2	MS/MSD RPD exceeds control limits
F4	MS/MSD RPD exceeds control limits due to sample size difference.
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Geotechnical

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: PDI-SG-B125-BL1

Date Collected: 04/11/18 17:02
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-1

Matrix: Solid
Percent Solids: 49.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	57	J	97	24	mg/Kg	☼	04/25/18 15:12	04/30/18 18:24	1
Motor Oil (>C24-C36)	320		97	34	mg/Kg	☼	04/25/18 15:12	04/30/18 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*04/25/18 15:12*	*04/30/18 18:24*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.7		0.64	0.13	mg/Kg	☼	04/17/18 14:41	04/18/18 11:57	10
Cadmium	0.20	J	0.51	0.099	mg/Kg	☼	04/17/18 14:41	04/18/18 11:57	10
Copper	34		1.3	0.28	mg/Kg	☼	04/17/18 14:41	04/18/18 11:57	10
Lead	9.4		0.64	0.062	mg/Kg	☼	04/17/18 14:41	04/18/18 11:57	10
Zinc	91		6.4	2.1	mg/Kg	☼	04/17/18 14:41	04/18/18 11:57	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.049		0.045	0.013	mg/Kg	☼	04/27/18 10:52	04/27/18 14:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	14000		2000	44	mg/Kg			04/20/18 17:22	1
Total Solids	49.8		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	8.3				%			04/23/18 15:07	1
Coarse Sand	0.0				%			04/23/18 15:07	1
Fine Sand	33.6				%			04/23/18 15:07	1
Gravel	0.1				%			04/23/18 15:07	1
Medium Sand	8.5				%			04/23/18 15:07	1
Silt	49.5				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B124-BL1

Date Collected: 04/11/18 16:16
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-2

Matrix: Solid
Percent Solids: 49.2

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	94	J	97	24	mg/Kg	☼	04/25/18 15:12	04/30/18 19:05	1
Motor Oil (>C24-C36)	300		97	34	mg/Kg	☼	04/25/18 15:12	04/30/18 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*04/25/18 15:12*	*04/30/18 19:05*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		0.79	0.16	mg/Kg	☼	04/17/18 14:41	04/18/18 11:59	10
Cadmium	0.18	J	0.63	0.12	mg/Kg	☼	04/17/18 14:41	04/18/18 11:59	10
Copper	35		1.6	0.35	mg/Kg	☼	04/17/18 14:41	04/18/18 11:59	10
Lead	9.9		0.79	0.075	mg/Kg	☼	04/17/18 14:41	04/18/18 11:59	10
Zinc	92		7.9	2.5	mg/Kg	☼	04/17/18 14:41	04/18/18 11:59	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.058		0.041	0.012	mg/Kg	☼	04/27/18 10:52	04/27/18 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	17000		2000	44	mg/Kg			04/20/18 17:27	1
Total Solids	49.2		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	8.9				%			04/23/18 15:07	1
Coarse Sand	0.2				%			04/23/18 15:07	1
Fine Sand	40.8				%			04/23/18 15:07	1
Gravel	0.9				%			04/23/18 15:07	1
Medium Sand	1.3				%			04/23/18 15:07	1
Silt	48.0				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B118-BL1

Date Collected: 04/11/18 15:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-3

Matrix: Solid
Percent Solids: 44.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	52	J	100	26	mg/Kg	☼	04/25/18 15:12	04/30/18 19:26	1
Motor Oil (>C24-C36)	300		100	36	mg/Kg	☼	04/25/18 15:12	04/30/18 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*04/25/18 15:12*	*04/30/18 19:26*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.8		0.83	0.17	mg/Kg	☼	04/17/18 14:41	04/18/18 12:02	10
Cadmium	0.25	J	0.67	0.13	mg/Kg	☼	04/17/18 14:41	04/18/18 12:02	10
Copper	40		1.7	0.37	mg/Kg	☼	04/17/18 14:41	04/18/18 12:02	10
Lead	11		0.83	0.080	mg/Kg	☼	04/17/18 14:41	04/18/18 12:02	10
Zinc	110		8.3	2.7	mg/Kg	☼	04/17/18 14:41	04/18/18 12:02	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.066		0.056	0.017	mg/Kg	☼	04/27/18 10:52	04/27/18 14:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	19000		2000	44	mg/Kg			04/20/18 17:32	1
Total Solids	44.9		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	13.9				%			04/23/18 15:07	1
Coarse Sand	0.0				%			04/23/18 15:07	1
Fine Sand	32.5				%			04/23/18 15:07	1
Gravel	0.0				%			04/23/18 15:07	1
Medium Sand	0.3				%			04/23/18 15:07	1
Silt	53.3				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B140-BL1

Date Collected: 04/12/18 10:15
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-4

Matrix: Solid
Percent Solids: 59.0

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	41	J	83	20	mg/Kg	☼	04/25/18 15:12	04/30/18 19:47	1
Motor Oil (>C24-C36)	130		83	29	mg/Kg	☼	04/25/18 15:12	04/30/18 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*04/25/18 15:12*	*04/30/18 19:47*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.8		0.63	0.13	mg/Kg	☼	04/17/18 14:41	04/18/18 12:05	10
Cadmium	0.15	J	0.50	0.097	mg/Kg	☼	04/17/18 14:41	04/18/18 12:05	10
Copper	27		1.3	0.28	mg/Kg	☼	04/17/18 14:41	04/18/18 12:05	10
Lead	8.3		0.63	0.060	mg/Kg	☼	04/17/18 14:41	04/18/18 12:05	10
Zinc	78		6.3	2.0	mg/Kg	☼	04/17/18 14:41	04/18/18 12:05	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.040	J	0.042	0.013	mg/Kg	☼	04/27/18 10:52	04/27/18 14:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	8300		2000	44	mg/Kg			04/20/18 17:37	1
Total Solids	59.0		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.5				%			04/23/18 15:07	1
Coarse Sand	1.4				%			04/23/18 15:07	1
Fine Sand	35.0				%			04/23/18 15:07	1
Gravel	2.4				%			04/23/18 15:07	1
Medium Sand	23.5				%			04/23/18 15:07	1
Silt	30.3				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B139-BL1

Date Collected: 04/12/18 11:27
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-5

Matrix: Solid
Percent Solids: 41.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	55	J	110	27	mg/Kg	☼	04/25/18 15:12	04/30/18 20:07	1
Motor Oil (>C24-C36)	330		110	39	mg/Kg	☼	04/25/18 15:12	04/30/18 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*50 - 150*	*04/25/18 15:12*	*04/30/18 20:07*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.3		0.84	0.17	mg/Kg	☼	04/17/18 14:41	04/18/18 12:08	10
Cadmium	0.18	J	0.67	0.13	mg/Kg	☼	04/17/18 14:41	04/18/18 12:08	10
Copper	39		1.7	0.37	mg/Kg	☼	04/17/18 14:41	04/18/18 12:08	10
Lead	11		0.84	0.081	mg/Kg	☼	04/17/18 14:41	04/18/18 12:08	10
Zinc	96		8.4	2.7	mg/Kg	☼	04/17/18 14:41	04/18/18 12:08	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.065		0.055	0.017	mg/Kg	☼	04/27/18 10:52	04/27/18 14:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	21000		2000	44	mg/Kg			04/20/18 17:42	1
Total Solids	41.9		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	12.5				%			04/23/18 15:07	1
Coarse Sand	0.0				%			04/23/18 15:07	1
Fine Sand	21.9				%			04/23/18 15:07	1
Gravel	0.0				%			04/23/18 15:07	1
Medium Sand	0.3				%			04/23/18 15:07	1
Silt	65.4				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B144-BL1

Date Collected: 04/12/18 13:03
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-6

Matrix: Solid
Percent Solids: 59.5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	41	J	77	19	mg/Kg	☼	04/25/18 15:12	04/30/18 20:27	1
Motor Oil (>C24-C36)	210		77	27	mg/Kg	☼	04/25/18 15:12	04/30/18 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*04/25/18 15:12*	*04/30/18 20:27*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.2		0.48	0.097	mg/Kg	☼	04/17/18 14:41	04/18/18 12:11	10
Cadmium	0.12	J	0.39	0.074	mg/Kg	☼	04/17/18 14:41	04/18/18 12:11	10
Copper	22		0.97	0.21	mg/Kg	☼	04/17/18 14:41	04/18/18 12:11	10
Lead	8.1		0.48	0.046	mg/Kg	☼	04/17/18 14:41	04/18/18 12:11	10
Zinc	72		4.8	1.6	mg/Kg	☼	04/17/18 14:41	04/18/18 12:11	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042		0.038	0.011	mg/Kg	☼	04/27/18 10:52	04/27/18 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	9300		2000	44	mg/Kg			04/20/18 17:50	1
Total Solids	59.5		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	5.8				%			04/23/18 15:07	1
Coarse Sand	1.4				%			04/23/18 15:07	1
Fine Sand	37.5				%			04/23/18 15:07	1
Gravel	0.8				%			04/23/18 15:07	1
Medium Sand	30.7				%			04/23/18 15:07	1
Silt	23.7				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B146-BL1

Date Collected: 04/12/18 14:30
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-7

Matrix: Solid
Percent Solids: 71.4

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1200		320	79	mg/Kg	☼	04/25/18 15:12	04/30/18 21:08	5
Motor Oil (>C24-C36)	1200		320	110	mg/Kg	☼	04/25/18 15:12	04/30/18 21:08	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*220*	*X*	*50 - 150*	*04/25/18 15:12*	*04/30/18 21:08*	*5*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.47	0.094	mg/Kg	☼	04/17/18 14:41	04/18/18 12:13	10
Cadmium	0.089	J	0.38	0.072	mg/Kg	☼	04/17/18 14:41	04/18/18 12:13	10
Copper	16		0.94	0.21	mg/Kg	☼	04/17/18 14:41	04/18/18 12:13	10
Lead	22		0.47	0.045	mg/Kg	☼	04/17/18 14:41	04/18/18 12:13	10
Zinc	58		4.7	1.5	mg/Kg	☼	04/17/18 14:41	04/18/18 12:13	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.017	J	0.032	0.0097	mg/Kg	☼	04/27/18 10:52	04/27/18 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	5100		2000	44	mg/Kg			04/20/18 17:58	1
Total Solids	71.4		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	1.4				%			04/23/18 15:07	1
Coarse Sand	5.1				%			04/23/18 15:07	1
Fine Sand	33.9				%			04/23/18 15:07	1
Gravel	12.8				%			04/23/18 15:07	1
Medium Sand	42.2				%			04/23/18 15:07	1
Silt	4.7				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B147-BL1

Date Collected: 04/12/18 15:45
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-8

Matrix: Solid
Percent Solids: 41.1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	66	J	120	29	mg/Kg	☼	04/25/18 15:12	04/30/18 21:28	1
Motor Oil (>C24-C36)	420		120	41	mg/Kg	☼	04/25/18 15:12	04/30/18 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*04/25/18 15:12*	*04/30/18 21:28*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.85	0.17	mg/Kg	☼	04/17/18 14:41	04/18/18 11:32	10
Cadmium	0.20	J	0.68	0.13	mg/Kg	☼	04/17/18 14:41	04/18/18 11:32	10
Copper	40	F1	1.7	0.37	mg/Kg	☼	04/17/18 14:41	04/18/18 11:32	10
Lead	11		0.85	0.082	mg/Kg	☼	04/17/18 14:41	04/18/18 11:32	10
Zinc	94		8.5	2.7	mg/Kg	☼	04/17/18 14:41	04/18/18 11:32	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051	J F1	0.062	0.019	mg/Kg	☼	04/27/18 10:52	04/27/18 14:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	25000		2000	44	mg/Kg			04/20/18 18:14	1
Total Solids	41.1		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	13.0				%			04/23/18 15:07	1
Coarse Sand	0.0				%			04/23/18 15:07	1
Fine Sand	14.1				%			04/23/18 15:07	1
Gravel	0.0				%			04/23/18 15:07	1
Medium Sand	0.3				%			04/23/18 15:07	1
Silt	72.6				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B149-BL1

Date Collected: 04/12/18 16:45
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-9

Matrix: Solid
Percent Solids: 42.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	73	J	110	28	mg/Kg	☼	04/25/18 15:12	04/30/18 22:29	1
Motor Oil (>C24-C36)	470		110	40	mg/Kg	☼	04/25/18 15:12	04/30/18 22:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*04/25/18 15:12*	*04/30/18 22:29*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.5		0.69	0.14	mg/Kg	☼	04/17/18 14:41	04/18/18 12:16	10
Cadmium	0.20	J	0.55	0.11	mg/Kg	☼	04/17/18 14:41	04/18/18 12:16	10
Copper	39		1.4	0.30	mg/Kg	☼	04/17/18 14:41	04/18/18 12:16	10
Lead	11		0.69	0.066	mg/Kg	☼	04/17/18 14:41	04/18/18 12:16	10
Zinc	95		6.9	2.2	mg/Kg	☼	04/17/18 14:41	04/18/18 12:16	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.055		0.047	0.014	mg/Kg	☼	04/27/18 10:52	04/27/18 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	25000		2000	44	mg/Kg			04/20/18 18:03	1
Total Solids	42.8		0.1	0.1	%			04/17/18 11:23	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	12.9				%			04/23/18 15:07	1
Coarse Sand	0.0				%			04/23/18 15:07	1
Fine Sand	16.5				%			04/23/18 15:07	1
Gravel	0.0				%			04/23/18 15:07	1
Medium Sand	1.3				%			04/23/18 15:07	1
Silt	69.3				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B134-BL1

Date Collected: 04/12/18 16:59
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-10

Matrix: Solid
Percent Solids: 43.6

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	57	J	110	26	mg/Kg	☼	04/25/18 15:12	04/30/18 22:50	1
Motor Oil (>C24-C36)	360		110	37	mg/Kg	☼	04/25/18 15:12	04/30/18 22:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*04/25/18 15:12*	*04/30/18 22:50*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.5		0.71	0.14	mg/Kg	☼	04/17/18 14:41	04/18/18 12:19	10
Cadmium	0.21	J	0.57	0.11	mg/Kg	☼	04/17/18 14:41	04/18/18 12:19	10
Copper	41		1.4	0.31	mg/Kg	☼	04/17/18 14:41	04/18/18 12:19	10
Lead	12		0.71	0.069	mg/Kg	☼	04/17/18 14:41	04/18/18 12:19	10
Zinc	100		7.1	2.3	mg/Kg	☼	04/17/18 14:41	04/18/18 12:19	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12		0.047	0.014	mg/Kg	☼	04/27/18 10:52	04/27/18 14:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	23000	B	2000	44	mg/Kg			04/24/18 16:50	1
Total Solids	43.6		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	10.6				%			04/23/18 15:07	1
Coarse Sand	0.0				%			04/23/18 15:07	1
Fine Sand	20.8				%			04/23/18 15:07	1
Gravel	0.0				%			04/23/18 15:07	1
Medium Sand	0.1				%			04/23/18 15:07	1
Silt	68.4				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B121-BL1

Date Collected: 04/12/18 12:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-11

Matrix: Solid
Percent Solids: 41.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	62	J	110	28	mg/Kg	☼	04/25/18 15:12	04/30/18 23:10	1
Motor Oil (>C24-C36)	390		110	40	mg/Kg	☼	04/25/18 15:12	04/30/18 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*04/25/18 15:12*	*04/30/18 23:10*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.73	0.15	mg/Kg	☼	04/17/18 14:41	04/18/18 12:33	10
Cadmium	0.21	J	0.58	0.11	mg/Kg	☼	04/17/18 14:41	04/18/18 12:33	10
Copper	39		1.5	0.32	mg/Kg	☼	04/17/18 14:41	04/18/18 12:33	10
Lead	12		0.73	0.070	mg/Kg	☼	04/17/18 14:41	04/18/18 12:33	10
Zinc	97		7.3	2.3	mg/Kg	☼	04/17/18 14:41	04/18/18 12:33	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.059		0.051	0.015	mg/Kg	☼	04/27/18 10:52	04/27/18 14:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	23000	B	2000	44	mg/Kg			04/24/18 16:55	1
Total Solids	41.8		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	11.0				%			04/23/18 15:07	1
Coarse Sand	0.2				%			04/23/18 15:07	1
Fine Sand	17.4				%			04/23/18 15:07	1
Gravel	0.0				%			04/23/18 15:07	1
Medium Sand	2.2				%			04/23/18 15:07	1
Silt	69.3				%			04/23/18 15:07	1

Client Sample ID: PDI-SG-B127-BL1

Date Collected: 04/12/18 13:59
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-12

Matrix: Solid
Percent Solids: 40.7

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	79	J	110	28	mg/Kg	☼	04/25/18 15:12	04/30/18 23:30	1
Motor Oil (>C24-C36)	460		110	40	mg/Kg	☼	04/25/18 15:12	04/30/18 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*04/25/18 15:12*	*04/30/18 23:30*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.88	0.18	mg/Kg	☼	04/17/18 14:41	04/18/18 12:36	10
Cadmium	0.18	J	0.71	0.14	mg/Kg	☼	04/17/18 14:41	04/18/18 12:36	10
Copper	39		1.8	0.39	mg/Kg	☼	04/17/18 14:41	04/18/18 12:36	10
Lead	26		0.88	0.085	mg/Kg	☼	04/17/18 14:41	04/18/18 12:36	10
Zinc	96		8.8	2.8	mg/Kg	☼	04/17/18 14:41	04/18/18 12:36	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.086		0.051	0.015	mg/Kg	☼	04/27/18 10:52	04/27/18 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	24000	B	2000	44	mg/Kg			04/24/18 17:22	1
Total Solids	40.7		0.1	0.1	%			04/17/18 11:23	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	11.5				%			04/25/18 13:33	1
Coarse Sand	0.1				%			04/25/18 13:33	1
Fine Sand	24.6				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.8				%			04/25/18 13:33	1
Silt	63.1				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B111-BL1
Date Collected: 04/11/18 09:40
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-13
Matrix: Solid
Percent Solids: 42.0

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	75	J	110	27	mg/Kg	☼	04/25/18 15:12	04/30/18 23:51	1
Motor Oil (>C24-C36)	420		110	39	mg/Kg	☼	04/25/18 15:12	04/30/18 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*04/25/18 15:12*	*04/30/18 23:51*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.7		0.68	0.14	mg/Kg	☼	04/17/18 14:41	04/18/18 12:38	10
Cadmium	0.20	J	0.54	0.10	mg/Kg	☼	04/17/18 14:41	04/18/18 12:38	10
Copper	41		1.4	0.30	mg/Kg	☼	04/17/18 14:41	04/18/18 12:38	10
Lead	12		0.68	0.065	mg/Kg	☼	04/17/18 14:41	04/18/18 12:38	10
Zinc	100		6.8	2.2	mg/Kg	☼	04/17/18 14:41	04/18/18 12:38	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.059		0.048	0.014	mg/Kg	☼	04/27/18 10:52	04/27/18 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	24000	B	2000	44	mg/Kg			04/24/18 17:27	1
Total Solids	42.0		0.1	0.1	%			04/17/18 11:23	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	11.7				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	16.7				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.3				%			04/25/18 13:33	1
Silt	71.3				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B113-BL1

Date Collected: 04/11/18 10:42
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-14

Matrix: Solid
Percent Solids: 60.4

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	35	J	76	19	mg/Kg	☼	04/25/18 15:12	05/01/18 00:11	1
Motor Oil (>C24-C36)	190		76	26	mg/Kg	☼	04/25/18 15:12	05/01/18 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*04/25/18 15:12*	*05/01/18 00:11*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.66	0.13	mg/Kg	☼	04/17/18 14:41	04/18/18 12:41	10
Cadmium	ND		0.53	0.10	mg/Kg	☼	04/17/18 14:41	04/18/18 12:41	10
Copper	26		1.3	0.29	mg/Kg	☼	04/17/18 14:41	04/18/18 12:41	10
Lead	8.0		0.66	0.064	mg/Kg	☼	04/17/18 14:41	04/18/18 12:41	10
Zinc	79		6.6	2.1	mg/Kg	☼	04/17/18 14:41	04/18/18 12:41	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.033		0.033	0.0099	mg/Kg	☼	04/27/18 10:52	04/27/18 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	9900	B	2000	44	mg/Kg			04/24/18 17:32	1
Total Solids	60.4		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	8.6				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	45.2				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	16.3				%			04/25/18 13:33	1
Silt	29.8				%			04/25/18 13:33	1

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B119-BL1
Date Collected: 04/11/18 11:34
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-15
Matrix: Solid
Percent Solids: 48.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	48	J	96	24	mg/Kg	☼	04/25/18 15:12	05/02/18 00:21	1
Motor Oil (>C24-C36)	300		96	34	mg/Kg	☼	04/25/18 15:12	05/02/18 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*50 - 150*	*04/25/18 15:12*	*05/02/18 00:21*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.74	0.15	mg/Kg	☼	04/17/18 14:41	04/18/18 12:44	10
Cadmium	0.17	J	0.60	0.11	mg/Kg	☼	04/17/18 14:41	04/18/18 12:44	10
Copper	34		1.5	0.33	mg/Kg	☼	04/17/18 14:41	04/18/18 12:44	10
Lead	9.9		0.74	0.071	mg/Kg	☼	04/17/18 14:41	04/18/18 12:44	10
Zinc	87		7.4	2.4	mg/Kg	☼	04/17/18 14:41	04/18/18 12:44	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050		0.042	0.013	mg/Kg	☼	04/27/18 10:52	04/27/18 15:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	21000	B	2000	44	mg/Kg			04/24/18 17:37	1
Total Solids	48.9		0.1	0.1	%			04/17/18 11:23	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	9.7				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	21.3				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.2				%			04/25/18 13:33	1
Silt	68.8				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B122-BL1

Date Collected: 04/11/18 14:06
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-16

Matrix: Solid
Percent Solids: 48.7

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	55	J	99	24	mg/Kg	☼	04/25/18 15:12	05/02/18 00:42	1
Motor Oil (>C24-C36)	290		99	35	mg/Kg	☼	04/25/18 15:12	05/02/18 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*04/25/18 15:12*	*05/02/18 00:42*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4		0.74	0.15	mg/Kg	☼	04/17/18 14:41	04/18/18 12:47	10
Cadmium	0.18	J	0.59	0.11	mg/Kg	☼	04/17/18 14:41	04/18/18 12:47	10
Copper	31		1.5	0.33	mg/Kg	☼	04/17/18 14:41	04/18/18 12:47	10
Lead	12		0.74	0.071	mg/Kg	☼	04/17/18 14:41	04/18/18 12:47	10
Zinc	84		7.4	2.4	mg/Kg	☼	04/17/18 14:41	04/18/18 12:47	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.058		0.040	0.012	mg/Kg	☼	04/27/18 10:52	04/27/18 15:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	23000	B	2000	44	mg/Kg			04/24/18 17:42	1
Total Solids	48.7		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.5				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	22.4				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.2				%			04/25/18 13:33	1
Silt	69.8				%			04/25/18 13:33	1

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B122-BL1-D
Date Collected: 04/11/18 14:06
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-17
Matrix: Solid
Percent Solids: 50.7

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	53	J	96	24	mg/Kg	☼	04/25/18 15:12	05/02/18 01:02	1
Motor Oil (>C24-C36)	350		96	34	mg/Kg	☼	04/25/18 15:12	05/02/18 01:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*04/25/18 15:12*	*05/02/18 01:02*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6		0.78	0.16	mg/Kg	☼	04/17/18 14:41	04/18/18 12:50	10
Cadmium	0.15	J	0.62	0.12	mg/Kg	☼	04/17/18 14:41	04/18/18 12:50	10
Copper	25		1.6	0.34	mg/Kg	☼	04/17/18 14:41	04/18/18 12:50	10
Lead	9.6		0.78	0.075	mg/Kg	☼	04/17/18 14:41	04/18/18 12:50	10
Zinc	70		7.8	2.5	mg/Kg	☼	04/17/18 14:41	04/18/18 12:50	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.058		0.045	0.014	mg/Kg	☼	04/27/18 10:52	04/27/18 15:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	20000	B	2000	44	mg/Kg			04/24/18 17:53	1
Total Solids	50.7		0.1	0.1	%			04/17/18 11:23	1

Client Sample ID: PDI-SG-B123-BL1

Date Collected: 04/11/18 13:20
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-18

Matrix: Solid
Percent Solids: 65.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	2200		1500	370	mg/Kg	☼	04/25/18 15:12	05/02/18 12:44	20
Motor Oil (>C24-C36)	3800		1500	520	mg/Kg	☼	04/25/18 15:12	05/02/18 12:44	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*305*	*X*	*50 - 150*	*04/25/18 15:12*	*05/02/18 12:44*	*20*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.1		0.56	0.11	mg/Kg	☼	04/17/18 14:41	04/18/18 12:52	10
Cadmium	0.088	J	0.45	0.087	mg/Kg	☼	04/17/18 14:41	04/18/18 12:52	10
Copper	20		1.1	0.25	mg/Kg	☼	04/17/18 14:41	04/18/18 12:52	10
Lead	6.0		0.56	0.054	mg/Kg	☼	04/17/18 14:41	04/18/18 12:52	10
Zinc	65		5.6	1.8	mg/Kg	☼	04/17/18 14:41	04/18/18 12:52	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.034	J	0.038	0.011	mg/Kg	☼	04/27/18 10:52	04/27/18 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	7000	B	2000	44	mg/Kg			04/24/18 17:58	1
Total Solids	65.8		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	3.4				%			04/25/18 13:33	1
Coarse Sand	0.6				%			04/25/18 13:33	1
Fine Sand	47.6				%			04/25/18 13:33	1
Gravel	3.2				%			04/25/18 13:33	1
Medium Sand	30.1				%			04/25/18 13:33	1
Silt	15.2				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B126-BL1
Date Collected: 04/11/18 15:18
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-19
Matrix: Solid
Percent Solids: 39.1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	140		120	29	mg/Kg	☼	04/25/18 15:13	05/02/18 01:22	1
Motor Oil (>C24-C36)	570		120	41	mg/Kg	☼	04/25/18 15:13	05/02/18 01:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*04/25/18 15:13*	*05/02/18 01:22*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.8		0.48	0.096	mg/Kg	☼	04/19/18 15:23	04/20/18 09:57	5
Cadmium	0.24	J	0.38	0.074	mg/Kg	☼	04/19/18 15:23	04/20/18 09:57	5
Copper	46		0.96	0.21	mg/Kg	☼	04/19/18 15:23	04/20/18 09:57	5
Lead	15		0.48	0.046	mg/Kg	☼	04/19/18 15:23	04/20/18 09:57	5
Zinc	110		4.8	1.5	mg/Kg	☼	04/19/18 15:23	04/20/18 09:57	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.078		0.076	0.023	mg/Kg	☼	04/27/18 12:06	04/27/18 15:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	30000	B	2000	44	mg/Kg			04/24/18 18:03	1
Total Solids	39.1		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	14.8				%			04/25/18 13:33	1
Coarse Sand	0.2				%			04/25/18 13:33	1
Fine Sand	9.5				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.6				%			04/25/18 13:33	1
Silt	74.8				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B136-BL1
Date Collected: 04/11/18 16:43
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-20
Matrix: Solid
Percent Solids: 40.4

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	61	J	120	29	mg/Kg	☼	04/25/18 15:15	05/02/18 01:42	1
Motor Oil (>C24-C36)	350		120	42	mg/Kg	☼	04/25/18 15:15	05/02/18 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*50 - 150*	*04/25/18 15:15*	*05/02/18 01:42*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		0.41	0.081	mg/Kg	☼	04/19/18 15:23	04/20/18 10:01	5
Cadmium	0.24	J	0.33	0.063	mg/Kg	☼	04/19/18 15:23	04/20/18 10:01	5
Copper	39		0.81	0.18	mg/Kg	☼	04/19/18 15:23	04/20/18 10:01	5
Lead	11		0.41	0.039	mg/Kg	☼	04/19/18 15:23	04/20/18 10:01	5
Zinc	100		4.1	1.3	mg/Kg	☼	04/19/18 15:23	04/20/18 10:01	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.057		0.054	0.016	mg/Kg	☼	04/27/18 12:06	04/27/18 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	26000	B	2000	44	mg/Kg			04/24/18 18:09	1
Total Solids	40.4		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	12.0				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	14.4				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.6				%			04/25/18 13:33	1
Silt	73.0				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B101-BL1
Date Collected: 04/11/18 09:43
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-21
Matrix: Solid
Percent Solids: 38.2

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	28	mg/Kg	☼	04/25/18 15:29	04/26/18 22:02	1
Motor Oil (>C24-C36)	**150**	**F1 F2**	110	40	mg/Kg	☼	04/25/18 15:29	04/26/18 22:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*04/25/18 15:29*	*04/26/18 22:02*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.0**	**F2**	0.45	0.089	mg/Kg	☼	04/19/18 15:23	04/20/18 09:22	5
Cadmium	**0.30**	**J F2**	0.36	0.069	mg/Kg	☼	04/19/18 15:23	04/20/18 09:22	5
Copper	**43**		0.89	0.20	mg/Kg	☼	04/19/18 15:23	04/20/18 09:22	5
Lead	**15**	**F2**	0.45	0.043	mg/Kg	☼	04/19/18 15:23	04/20/18 09:22	5
Zinc	**110**	**F2**	4.5	1.4	mg/Kg	☼	04/19/18 15:23	04/20/18 09:22	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.061**	**J**	0.070	0.021	mg/Kg	☼	04/27/18 12:06	04/27/18 15:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**23000**	**B**	2000	44	mg/Kg			04/24/18 18:14	1
Total Solids	**38.2**		0.1	0.1	%			04/17/18 11:23	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	**13.1**				%			04/25/18 13:33	1
Coarse Sand	**0.0**				%			04/25/18 13:33	1
Fine Sand	**9.8**				%			04/25/18 13:33	1
Gravel	**0.0**				%			04/25/18 13:33	1
Medium Sand	**0.3**				%			04/25/18 13:33	1
Silt	**76.8**				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B105-BL1

Date Collected: 04/11/18 10:44
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-22

Matrix: Solid
Percent Solids: 47.2

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		100	26	mg/Kg	☼	04/25/18 15:29	04/26/18 23:11	1
Motor Oil (>C24-C36)	**99**	**J**	100	37	mg/Kg	☼	04/25/18 15:29	04/26/18 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*50 - 150*	*04/25/18 15:29*	*04/26/18 23:11*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.8**		0.40	0.080	mg/Kg	☼	04/19/18 15:23	04/20/18 10:04	5
Cadmium	**0.24**	**J**	0.32	0.061	mg/Kg	☼	04/19/18 15:23	04/20/18 10:04	5
Copper	**38**		0.80	0.18	mg/Kg	☼	04/19/18 15:23	04/20/18 10:04	5
Lead	**11**		0.40	0.038	mg/Kg	☼	04/19/18 15:23	04/20/18 10:04	5
Zinc	**100**		4.0	1.3	mg/Kg	☼	04/19/18 15:23	04/20/18 10:04	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.065**		0.049	0.015	mg/Kg	☼	04/27/18 12:06	04/27/18 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**20000**	**B**	2000	44	mg/Kg			04/24/18 18:42	1
Total Solids	**47.2**		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	**7.5**				%			04/25/18 13:33	1
Coarse Sand	**0.0**				%			04/25/18 13:33	1
Fine Sand	**28.5**				%			04/25/18 13:33	1
Gravel	**0.0**				%			04/25/18 13:33	1
Medium Sand	**0.1**				%			04/25/18 13:33	1
Silt	**63.9**				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B107-BL1
Date Collected: 04/11/18 11:31
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-23
Matrix: Solid
Percent Solids: 44.0

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	26	mg/Kg	☼	04/25/18 15:29	04/26/18 23:56	1
Motor Oil (>C24-C36)	**160**		110	37	mg/Kg	☼	04/25/18 15:29	04/26/18 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*50 - 150*	*04/25/18 15:29*	*04/26/18 23:56*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.9**		0.43	0.087	mg/Kg	☼	04/19/18 15:23	04/20/18 10:08	5
Cadmium	**0.24**	**J**	0.35	0.067	mg/Kg	☼	04/19/18 15:23	04/20/18 10:08	5
Copper	**41**		0.87	0.19	mg/Kg	☼	04/19/18 15:23	04/20/18 10:08	5
Lead	**11**		0.43	0.042	mg/Kg	☼	04/19/18 15:23	04/20/18 10:08	5
Zinc	**100**		4.3	1.4	mg/Kg	☼	04/19/18 15:23	04/20/18 10:08	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.046**	**J**	0.060	0.018	mg/Kg	☼	04/27/18 12:06	04/27/18 15:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**24000**	**B**	2000	44	mg/Kg			04/24/18 18:47	1
Total Solids	**44.0**		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	**7.8**				%			04/25/18 13:33	1
Coarse Sand	**0.0**				%			04/25/18 13:33	1
Fine Sand	**22.0**				%			04/25/18 13:33	1
Gravel	**0.0**				%			04/25/18 13:33	1
Medium Sand	**0.1**				%			04/25/18 13:33	1
Silt	**70.1**				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B109-BL1
Date Collected: 04/11/18 13:19
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-24
Matrix: Solid
Percent Solids: 41.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		120	29	mg/Kg	☼	04/25/18 15:29	04/27/18 00:18	1
Motor Oil (>C24-C36)	150		120	41	mg/Kg	☼	04/25/18 15:29	04/27/18 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*50 - 150*	*04/25/18 15:29*	*04/27/18 00:18*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.42	0.083	mg/Kg	☼	04/19/18 15:23	04/20/18 10:12	5
Cadmium	0.28	J	0.33	0.064	mg/Kg	☼	04/19/18 15:23	04/20/18 10:12	5
Copper	43		0.83	0.18	mg/Kg	☼	04/19/18 15:23	04/20/18 10:12	5
Lead	12		0.42	0.040	mg/Kg	☼	04/19/18 15:23	04/20/18 10:12	5
Zinc	110		4.2	1.3	mg/Kg	☼	04/19/18 15:23	04/20/18 10:12	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.053	J	0.070	0.021	mg/Kg	☼	04/27/18 12:06	04/27/18 15:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	26000	B	2000	44	mg/Kg			04/24/18 18:52	1
Total Solids	41.8		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	13.1				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	12.7				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.1				%			04/25/18 13:33	1
Silt	74.1				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B116-BL1

Date Collected: 04/12/18 10:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-25

Matrix: Solid
Percent Solids: 70.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	19	J	65	16	mg/Kg	☼	04/25/18 15:29	04/27/18 00:41	1
Motor Oil (>C24-C36)	91		65	23	mg/Kg	☼	04/25/18 15:29	04/27/18 00:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*04/25/18 15:29*	*04/27/18 00:41*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.6		0.21	0.041	mg/Kg	☼	04/19/18 15:23	04/20/18 10:16	5
Cadmium	0.39		0.17	0.032	mg/Kg	☼	04/19/18 15:23	04/20/18 10:16	5
Copper	21		0.41	0.091	mg/Kg	☼	04/19/18 15:23	04/20/18 10:16	5
Lead	14		0.21	0.020	mg/Kg	☼	04/19/18 15:23	04/20/18 10:16	5
Zinc	100		2.1	0.67	mg/Kg	☼	04/19/18 15:23	04/20/18 10:16	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	J	0.033	0.0099	mg/Kg	☼	04/27/18 12:06	04/27/18 15:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	4000	B	2000	44	mg/Kg			04/24/18 18:57	1
Total Solids	70.9		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	2.4				%			04/25/18 13:33	1
Coarse Sand	0.2				%			04/25/18 13:33	1
Fine Sand	55.1				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	34.1				%			04/25/18 13:33	1
Silt	8.1				%			04/25/18 13:33	1

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B131-BL1
Date Collected: 04/12/18 16:05
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-26
Matrix: Solid
Percent Solids: 42.3

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		120	29	mg/Kg	☼	04/25/18 15:29	04/27/18 01:25	1
Motor Oil (>C24-C36)	200		120	41	mg/Kg	☼	04/25/18 15:29	04/27/18 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*50 - 150*	*04/25/18 15:29*	*04/27/18 01:25*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.4		0.45	0.090	mg/Kg	☼	04/19/18 15:23	04/20/18 10:20	5
Cadmium	0.23	J	0.36	0.069	mg/Kg	☼	04/19/18 15:23	04/20/18 10:20	5
Copper	43		0.90	0.20	mg/Kg	☼	04/19/18 15:23	04/20/18 10:20	5
Lead	15		0.45	0.043	mg/Kg	☼	04/19/18 15:23	04/20/18 10:20	5
Zinc	110		4.5	1.4	mg/Kg	☼	04/19/18 15:23	04/20/18 10:20	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.054	J	0.058	0.017	mg/Kg	☼	04/27/18 12:06	04/27/18 15:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	24000	B	2000	44	mg/Kg			04/24/18 19:02	1
Total Solids	42.3		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.9				%			04/25/18 13:33	1
Coarse Sand	0.0				%			04/25/18 13:33	1
Fine Sand	20.9				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	0.2				%			04/25/18 13:33	1
Silt	71.0				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B130-BL1
Date Collected: 04/12/18 15:02
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-27
Matrix: Solid
Percent Solids: 50.3

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		180	45	mg/Kg	☼	04/25/18 15:29	04/27/18 01:48	2
Motor Oil (>C24-C36)	190		180	63	mg/Kg	☼	04/25/18 15:29	04/27/18 01:48	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*50 - 150*	*04/25/18 15:29*	*04/27/18 01:48*	*2*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		0.33	0.067	mg/Kg	☼	04/19/18 15:23	04/20/18 10:24	5
Cadmium	0.20	J	0.27	0.051	mg/Kg	☼	04/19/18 15:23	04/20/18 10:24	5
Copper	34		0.67	0.15	mg/Kg	☼	04/19/18 15:23	04/20/18 10:24	5
Lead	18		0.33	0.032	mg/Kg	☼	04/19/18 15:23	04/20/18 10:24	5
Zinc	100		3.3	1.1	mg/Kg	☼	04/19/18 15:23	04/20/18 10:24	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.052		0.041	0.012	mg/Kg	☼	04/27/18 12:06	04/27/18 15:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	20000	B	2000	44	mg/Kg			04/24/18 19:07	1
Total Solids	50.3		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	6.6				%			04/25/18 13:33	1
Coarse Sand	0.7				%			04/25/18 13:33	1
Fine Sand	41.6				%			04/25/18 13:33	1
Gravel	0.0				%			04/25/18 13:33	1
Medium Sand	8.0				%			04/25/18 13:33	1
Silt	43.1				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B120-BL1
Date Collected: 04/12/18 11:12
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-28
Matrix: Solid
Percent Solids: 69.9

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		69	17	mg/Kg	☼	04/25/18 15:29	04/27/18 02:10	1
Motor Oil (>C24-C36)	45	J	69	24	mg/Kg	☼	04/25/18 15:29	04/27/18 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*04/25/18 15:29*	*04/27/18 02:10*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.2		0.25	0.049	mg/Kg	☼	04/19/18 15:23	04/20/18 10:28	5
Cadmium	0.37		0.20	0.038	mg/Kg	☼	04/19/18 15:23	04/20/18 10:28	5
Copper	19		0.49	0.11	mg/Kg	☼	04/19/18 15:23	04/20/18 10:28	5
Lead	38		0.25	0.024	mg/Kg	☼	04/19/18 15:23	04/20/18 10:28	5
Zinc	130		2.5	0.80	mg/Kg	☼	04/19/18 15:23	04/20/18 10:28	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	J	0.034	0.010	mg/Kg	☼	04/27/18 12:06	04/27/18 15:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	4100	B	2000	44	mg/Kg			04/24/18 19:13	1
Total Solids	69.9		0.1	0.1	%			04/16/18 15:24	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	2.4				%			04/25/18 13:33	1
Coarse Sand	1.3				%			04/25/18 13:33	1
Fine Sand	60.0				%			04/25/18 13:33	1
Gravel	0.6				%			04/25/18 13:33	1
Medium Sand	30.4				%			04/25/18 13:33	1
Silt	5.4				%			04/25/18 13:33	1

Client Sample ID: PDI-SG-B120-BL1-D

Date Collected: 04/12/18 11:12
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-29

Matrix: Solid
Percent Solids: 71.3

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		65	16	mg/Kg	☼	04/25/18 15:29	04/27/18 02:32	1
Motor Oil (>C24-C36)	**66**		65	23	mg/Kg	☼	04/25/18 15:29	04/27/18 02:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*50 - 150*	*04/25/18 15:29*	*04/27/18 02:32*	*1*

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.5**		0.25	0.050	mg/Kg	☼	04/19/18 15:23	04/20/18 10:47	5
Cadmium	**0.51**		0.20	0.039	mg/Kg	☼	04/19/18 15:23	04/20/18 10:47	5
Copper	**16**		0.50	0.11	mg/Kg	☼	04/19/18 15:23	04/20/18 10:47	5
Lead	**55**		0.25	0.024	mg/Kg	☼	04/19/18 15:23	04/20/18 10:47	5
Zinc	**170**		2.5	0.81	mg/Kg	☼	04/19/18 15:23	04/20/18 10:47	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.022**	**J**	0.031	0.0092	mg/Kg	☼	04/27/18 12:06	04/27/18 15:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**5700**	**B**	2000	44	mg/Kg			04/24/18 19:18	1
Total Solids	**71.3**		0.1	0.1	%			04/16/18 15:24	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-272269/1-A
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272269

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		50	12	mg/Kg		04/25/18 15:12	04/30/18 17:22	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		04/25/18 15:12	04/30/18 17:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*04/25/18 15:12*	*04/30/18 17:22*	*1*

Lab Sample ID: MB 580-272269/1-A
Matrix: Solid
Analysis Batch: 272744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272269

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		50	12	mg/Kg		04/25/18 15:12	05/02/18 12:21	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		04/25/18 15:12	05/02/18 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*50 - 150*	*04/25/18 15:12*	*05/02/18 12:21*	*1*

Lab Sample ID: LCS 580-272269/2-A
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272269

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)			500	498		mg/Kg		100	70 - 125		
Motor Oil (>C24-C36)			500	520		mg/Kg		104	70 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*88*		*50 - 150*

Lab Sample ID: LCSD 580-272269/3-A
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272269

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)			500	497		mg/Kg		99	70 - 125	0	16
Motor Oil (>C24-C36)			500	524		mg/Kg		105	70 - 119	1	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*90*		*50 - 150*

Lab Sample ID: 580-76598-8 MS
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 272269

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
#2 Diesel (C10-C24)	66	J	1120	1040		mg/Kg	☼	87	70 - 125		
Motor Oil (>C24-C36)	420		1120	1500		mg/Kg	☼	96	70 - 119		

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-76598-8 MS
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 272269

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl	*74*		*50 - 150*

Lab Sample ID: 580-76598-8 MSD
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 272269

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	66	J	1160	1180		mg/Kg	☼	96	70 - 125	13	16
Motor Oil (>C24-C36)	420		1160	1640		mg/Kg	☼	105	70 - 119	9	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	*87*		*50 - 150*

Lab Sample ID: 580-76598-1 DU
Matrix: Solid
Analysis Batch: 272572

Client Sample ID: PDI-SG-B125-BL1
Prep Type: Total/NA
Prep Batch: 272269

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
#2 Diesel (C10-C24)	57	J		41.7	J	mg/Kg	☼			30	35
Motor Oil (>C24-C36)	320			259		mg/Kg	☼			20	35

Surrogate	DU %Recovery	DU Qualifier	Limits
o-Terphenyl	*91*		*50 - 150*

Lab Sample ID: 580-76598-20 DU
Matrix: Solid
Analysis Batch: 272683

Client Sample ID: PDI-SG-B136-BL1
Prep Type: Total/NA
Prep Batch: 272269

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
#2 Diesel (C10-C24)	61	J		66.9	J	mg/Kg	☼			9	35
Motor Oil (>C24-C36)	350			398		mg/Kg	☼			13	35

Surrogate	DU %Recovery	DU Qualifier	Limits
o-Terphenyl	*93*		*50 - 150*

Lab Sample ID: MB 580-272275/1-A
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		50	12	mg/Kg		04/25/18 15:29	04/26/18 20:52	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		04/25/18 15:29	04/26/18 20:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*91*		*50 - 150*	*04/25/18 15:29*	*04/26/18 20:52*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-272275/2-A
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	500	396		mg/Kg		79	70 - 125
Motor Oil (>C24-C36)	500	383		mg/Kg		77	70 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*81*		*50 - 150*

Lab Sample ID: LCSD 580-272275/3-A
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272275

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	500	400		mg/Kg		80	70 - 125	1	16
Motor Oil (>C24-C36)	500	400		mg/Kg		80	70 - 119	4	16

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*86*		*50 - 150*

Lab Sample ID: 580-76598-21 MS
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 272275

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
#2 Diesel (C10-C24)	ND		1210	886		mg/Kg	☼	73	70 - 125
Motor Oil (>C24-C36)	150	F1 F2	1210	946	F1	mg/Kg	☼	66	70 - 119

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*68*		*50 - 150*

Lab Sample ID: 580-76598-21 MSD
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 272275

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	ND		1300	1020		mg/Kg	☼	78	70 - 125	14	16
Motor Oil (>C24-C36)	150	F1 F2	1300	1120	F2	mg/Kg	☼	75	70 - 119	17	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*69*		*50 - 150*

Lab Sample ID: 580-76598-25 DU
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: PDI-SG-B116-BL1
Prep Type: Total/NA
Prep Batch: 272275

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
#2 Diesel (C10-C24)	19	J	ND		mg/Kg	☼	NC	35
Motor Oil (>C24-C36)	91		24.4	J F3	mg/Kg	☼	116	35

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-76598-25 DU
Matrix: Solid
Analysis Batch: 272350

Client Sample ID: PDI-SG-B116-BL1
Prep Type: Total/NA
Prep Batch: 272275

Surrogate	DU %Recovery	DU Qualifier	Limits
o-Terphenyl	*83*		*50 - 150*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-271598/22-A
Matrix: Solid
Analysis Batch: 271773

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 271598

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.10	mg/Kg		04/17/18 14:41	04/18/18 11:23	10
Cadmium	ND		0.40	0.077	mg/Kg		04/17/18 14:41	04/18/18 11:23	10
Copper	ND		1.0	0.22	mg/Kg		04/17/18 14:41	04/18/18 11:23	10
Lead	ND		0.50	0.048	mg/Kg		04/17/18 14:41	04/18/18 11:23	10
Zinc	ND		5.0	1.6	mg/Kg		04/17/18 14:41	04/18/18 11:23	10

Lab Sample ID: LCS 580-271598/23-A
Matrix: Solid
Analysis Batch: 271773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 271598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	203		mg/Kg		102	80 - 120
Cadmium	5.00	5.63		mg/Kg		113	80 - 120
Copper	25.0	26.6		mg/Kg		106	80 - 120
Lead	50.0	50.7		mg/Kg		101	80 - 120
Zinc	200	206		mg/Kg		103	80 - 120

Lab Sample ID: LCSD 580-271598/24-A
Matrix: Solid
Analysis Batch: 271773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 271598

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	205		mg/Kg		102	80 - 120	1	20
Cadmium	5.00	4.93		mg/Kg		99	80 - 120	13	20
Copper	25.0	27.3		mg/Kg		109	80 - 120	3	20
Lead	50.0	50.7		mg/Kg		101	80 - 120	0	20
Zinc	200	212		mg/Kg		106	80 - 120	3	20

Lab Sample ID: 580-76598-8 MS
Matrix: Solid
Analysis Batch: 271773

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 271598

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.2		340	360		mg/Kg	☼	105	80 - 120
Cadmium	0.20	J	8.49	8.97		mg/Kg	☼	103	80 - 120
Copper	40	F1	42.5	89.5		mg/Kg	☼	117	80 - 120
Lead	11		84.9	98.3		mg/Kg	☼	103	80 - 120
Zinc	94		340	453		mg/Kg	☼	106	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-76598-8 MSD
Matrix: Solid
Analysis Batch: 271773

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 271598

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.2		283	301		mg/Kg	☼	105	80 - 120	18	20
Cadmium	0.20	J	7.06	7.66		mg/Kg	☼	106	80 - 120	16	20
Copper	40	F1	35.3	82.6	F1	mg/Kg	☼	122	80 - 120	8	20
Lead	11		70.6	84.7		mg/Kg	☼	105	80 - 120	15	20
Zinc	94		283	397		mg/Kg	☼	108	80 - 120	13	20

Lab Sample ID: 580-76598-8 DU
Matrix: Solid
Analysis Batch: 271773

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 271598

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	5.2		5.48		mg/Kg	☼	4	20
Cadmium	0.20	J	0.196	J	mg/Kg	☼	0.5	20
Copper	40	F1	40.6		mg/Kg	☼	2	20
Lead	11		11.1		mg/Kg	☼	5	20
Zinc	94		97.1		mg/Kg	☼	4	20

Lab Sample ID: MB 580-271834/21-A
Matrix: Solid
Analysis Batch: 271997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 271834

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25	0.050	mg/Kg		04/19/18 15:23	04/20/18 09:06	5
Cadmium	ND		0.20	0.039	mg/Kg		04/19/18 15:23	04/20/18 09:06	5
Copper	ND		0.50	0.11	mg/Kg		04/19/18 15:23	04/20/18 09:06	5
Lead	ND		0.25	0.024	mg/Kg		04/19/18 15:23	04/20/18 09:06	5
Zinc	ND		2.5	0.81	mg/Kg		04/19/18 15:23	04/20/18 09:06	5

Lab Sample ID: LCS 580-271834/22-A
Matrix: Solid
Analysis Batch: 271997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 271834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	200	194		mg/Kg		97	80 - 120
Cadmium	5.00	4.55		mg/Kg		91	80 - 120
Copper	25.0	25.0		mg/Kg		100	80 - 120
Lead	50.0	48.0		mg/Kg		96	80 - 120
Zinc	200	195		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 580-271834/23-A
Matrix: Solid
Analysis Batch: 271997

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 271834

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	200	194		mg/Kg		97	80 - 120	0	20
Cadmium	5.00	5.25		mg/Kg		105	80 - 120	14	20
Copper	25.0	24.5		mg/Kg		98	80 - 120	2	20
Lead	50.0	47.4		mg/Kg		95	80 - 120	1	20
Zinc	200	196		mg/Kg		98	80 - 120	0	20

Lab Sample ID: 580-76598-21 MS
Matrix: Solid
Analysis Batch: 271997

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 271834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	6.0	F2	284	272		mg/Kg	☼	94	80 - 120
Cadmium	0.30	J F2	7.10	7.09		mg/Kg	☼	96	80 - 120
Copper	43		35.5	83.4		mg/Kg	☼	113	80 - 120
Lead	15	F2	71.0	82.2		mg/Kg	☼	95	80 - 120
Zinc	110	F2	284	395		mg/Kg	☼	100	80 - 120

Lab Sample ID: 580-76598-21 MSD
Matrix: Solid
Analysis Batch: 271997

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 271834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	6.0	F2	398	405	F4	mg/Kg	☼	100	80 - 120	39	20
Cadmium	0.30	J F2	9.96	10.7	F4	mg/Kg	☼	104	80 - 120	40	20
Copper	43		49.8	100		mg/Kg	☼	114	80 - 120	18	20
Lead	15	F2	99.6	115	F4	mg/Kg	☼	101	80 - 120	33	20
Zinc	110	F2	398	524	F4	mg/Kg	☼	103	80 - 120	28	20

Lab Sample ID: 580-76598-21 DU
Matrix: Solid
Analysis Batch: 271997

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 271834

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	6.0	F2	5.67		mg/Kg	☼	5	20
Cadmium	0.30	J F2	0.261	J	mg/Kg	☼	13	20
Copper	43		42.2		mg/Kg	☼	3	20
Lead	15	F2	14.3		mg/Kg	☼	2	20
Zinc	110	F2	109		mg/Kg	☼	4	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-272414/22-A
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030	0.0090	mg/Kg		04/27/18 10:52	04/27/18 14:08	1

Lab Sample ID: LCS 580-272414/23-A
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.168		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 580-272414/24-A
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.167	0.159		mg/Kg		96	80 - 120	5	20

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 580-76598-8 MS
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 272414

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.051	J F1	0.297	0.412	F1	mg/Kg	☼	122	80 - 120

Lab Sample ID: 580-76598-8 MSD
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 272414

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.051	J F1	0.356	0.438		mg/Kg	☼	109	80 - 120	6	20

Lab Sample ID: 580-76598-8 DU
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA
Prep Batch: 272414

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.051	J F1	0.0479	J	mg/Kg	☼	6	20

Lab Sample ID: MB 580-272418/21-A
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 272418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030	0.0090	mg/Kg		04/27/18 12:06	04/27/18 15:18	1

Lab Sample ID: LCS 580-272418/22-A
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 272418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.164		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 580-272418/23-A
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 272418

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.167	0.161		mg/Kg		96	80 - 120	2	20

Lab Sample ID: 580-76598-21 MS
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 272418

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.061	J	0.347	0.478		mg/Kg	☼	120	80 - 120

Lab Sample ID: 580-76598-21 MSD
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 272418

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.061	J	0.344	0.463		mg/Kg	☼	117	80 - 120	3	20

Lab Sample ID: 580-76598-21 DU
Matrix: Solid
Analysis Batch: 272528

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA
Prep Batch: 272418

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.061	J	0.0706	J	mg/Kg	☼	15	20

Method: 9060_PSEP - TOC (Puget Sound)

Lab Sample ID: MB 580-271995/3
Matrix: Solid
Analysis Batch: 271995

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		2000	44	mg/Kg			04/20/18 16:32	1

Lab Sample ID: LCS 580-271995/4
Matrix: Solid
Analysis Batch: 271995

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	4620	4740		mg/Kg		103	68 - 149

Lab Sample ID: LCSD 580-271995/5
Matrix: Solid
Analysis Batch: 271995

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	4620	4670		mg/Kg		101	68 - 149	1	32

Lab Sample ID: 580-76598-8 MS
Matrix: Solid
Analysis Batch: 271995

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	25000		120000	120000		mg/Kg		79	68 - 149

Lab Sample ID: 580-76598-8 MSD
Matrix: Solid
Analysis Batch: 271995

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	25000		120000	114000		mg/Kg		74	68 - 149	5	32

Lab Sample ID: 580-76598-8 DU
Matrix: Solid
Analysis Batch: 271995

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Duplicates	25000		25900		mg/Kg		4	50

Method: 9060_PSEP - TOC (Puget Sound) (Continued)

Lab Sample ID: 580-76598-8 TRL
Matrix: Solid
Analysis Batch: 271995

Client Sample ID: PDI-SG-B147-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
Total Organic Carbon - Duplicates	25000			26300		mg/Kg				3	20

Lab Sample ID: MB 580-272303/5
Matrix: Solid
Analysis Batch: 272303

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	158	J	2000	44	mg/Kg			04/24/18 16:42	1

Lab Sample ID: LCS 580-272303/6
Matrix: Solid
Analysis Batch: 272303

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates			4620	5900		mg/Kg		128	68 - 149		

Lab Sample ID: LCSD 580-272303/7
Matrix: Solid
Analysis Batch: 272303

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates			4620	5250		mg/Kg		114	68 - 149	12	32

Lab Sample ID: 580-76598-21 MS
Matrix: Solid
Analysis Batch: 272303

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates	23000	B	120000	118000		mg/Kg		79	68 - 149		

Lab Sample ID: 580-76598-21 MSD
Matrix: Solid
Analysis Batch: 272303

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	23000	B	120000	137000		mg/Kg		95	68 - 149	15	32

Lab Sample ID: 580-76598-21 DU
Matrix: Solid
Analysis Batch: 272303

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Duplicates	23000	B		23900		mg/Kg				2	50

Method: 9060_PSEP - TOC (Puget Sound) (Continued)

Lab Sample ID: 580-76598-21 TRL
Matrix: Solid
Analysis Batch: 272303

Client Sample ID: PDI-SG-B101-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
Total Organic Carbon - Duplicates	23000	B		23800		mg/Kg				1	20

Method: D 2216 - Percent Moisture

Lab Sample ID: 580-76598-26 DU
Matrix: Solid
Analysis Batch: 271503

Client Sample ID: PDI-SG-B131-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids	42.3			43.2		%				2	20

Method: D7928/D6913 - ASTM D7928/D6913

Lab Sample ID: 580-76598-12 DU
Matrix: Solid
Analysis Batch: 272241

Client Sample ID: PDI-SG-B127-BL1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Clay	11.5			11.4		%				0.9	20
Coarse Sand	0.1			0.1		%				0	20
Fine Sand	24.6			24.5		%				0.4	20
Gravel	0.0			0.3	F3	%				200	20
Medium Sand	0.8			0.9		%				12	20
Silt	63.1			62.8		%				0.5	20

Client Sample ID: PDI-SG-B125-BL1
Lab Sample ID: 580-76598-1
Date Collected: 04/11/18 17:02
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:22	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B125-BL1
Lab Sample ID: 580-76598-1
Date Collected: 04/11/18 17:02
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 49.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 18:24	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 11:57	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:24	FCW	TAL SEA

Client Sample ID: PDI-SG-B124-BL1
Lab Sample ID: 580-76598-2
Date Collected: 04/11/18 16:16
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:27	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B124-BL1
Lab Sample ID: 580-76598-2
Date Collected: 04/11/18 16:16
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 49.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 19:05	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 11:59	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:26	FCW	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B118-BL1
Date Collected: 04/11/18 15:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:32	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B118-BL1
Date Collected: 04/11/18 15:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-3
Matrix: Solid
Percent Solids: 44.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 19:26	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:02	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:29	FCW	TAL SEA

Client Sample ID: PDI-SG-B140-BL1
Date Collected: 04/12/18 10:15
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:37	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B140-BL1
Date Collected: 04/12/18 10:15
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-4
Matrix: Solid
Percent Solids: 59.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 19:47	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:05	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:36	FCW	TAL SEA

Client Sample ID: PDI-SG-B139-BL1

Lab Sample ID: 580-76598-5
Date Collected: 04/12/18 11:27
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:42	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B139-BL1

Lab Sample ID: 580-76598-5
Date Collected: 04/12/18 11:27
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 41.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 20:07	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:08	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:38	FCW	TAL SEA

Client Sample ID: PDI-SG-B144-BL1

Lab Sample ID: 580-76598-6
Date Collected: 04/12/18 13:03
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:50	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B144-BL1

Lab Sample ID: 580-76598-6
Date Collected: 04/12/18 13:03
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 59.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 20:27	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:11	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:40	FCW	TAL SEA

Client Sample ID: PDI-SG-B146-BL1

Lab Sample ID: 580-76598-7
Date Collected: 04/12/18 14:30
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 17:58	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B146-BL1

Lab Sample ID: 580-76598-7
Date Collected: 04/12/18 14:30
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 71.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	272572	04/30/18 21:08	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:13	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:43	FCW	TAL SEA

Client Sample ID: PDI-SG-B147-BL1

Lab Sample ID: 580-76598-8
Date Collected: 04/12/18 15:45
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 18:14	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B147-BL1

Lab Sample ID: 580-76598-8
Date Collected: 04/12/18 15:45
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 41.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 21:28	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 11:32	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:15	FCW	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B149-BL1

Lab Sample ID: 580-76598-9
Date Collected: 04/12/18 16:45
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	271995	04/20/18 18:03	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271557	04/17/18 11:23	APR	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B149-BL1

Lab Sample ID: 580-76598-9
Date Collected: 04/12/18 16:45
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 42.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 22:29	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:16	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:45	FCW	TAL SEA

Client Sample ID: PDI-SG-B134-BL1

Lab Sample ID: 580-76598-10
Date Collected: 04/12/18 16:59
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 16:50	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B134-BL1

Lab Sample ID: 580-76598-10
Date Collected: 04/12/18 16:59
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 43.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 22:50	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:19	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:47	FCW	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B121-BL1
Date Collected: 04/12/18 12:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 16:55	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272065	04/23/18 15:07	HJM	TAL SEA

Client Sample ID: PDI-SG-B121-BL1
Date Collected: 04/12/18 12:22
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-11
Matrix: Solid
Percent Solids: 41.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 23:10	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:33	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:50	FCW	TAL SEA

Client Sample ID: PDI-SG-B127-BL1
Date Collected: 04/12/18 13:59
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:22	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271557	04/17/18 11:23	APR	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B127-BL1
Date Collected: 04/12/18 13:59
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-12
Matrix: Solid
Percent Solids: 40.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 23:30	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:36	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:52	FCW	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B111-BL1
Lab Sample ID: 580-76598-13
Date Collected: 04/11/18 09:40
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:27	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271557	04/17/18 11:23	APR	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B111-BL1
Lab Sample ID: 580-76598-13
Date Collected: 04/11/18 09:40
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 42.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	04/30/18 23:51	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:38	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:54	FCW	TAL SEA

Client Sample ID: PDI-SG-B113-BL1
Lab Sample ID: 580-76598-14
Date Collected: 04/11/18 10:42
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:32	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B113-BL1
Lab Sample ID: 580-76598-14
Date Collected: 04/11/18 10:42
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 60.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272572	05/01/18 00:11	ADB	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:41	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 14:57	FCW	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B119-BL1
Date Collected: 04/11/18 11:34
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:37	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271557	04/17/18 11:23	APR	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B119-BL1
Date Collected: 04/11/18 11:34
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-15
Matrix: Solid
Percent Solids: 48.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272683	05/02/18 00:21	CJ	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:44	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:04	FCW	TAL SEA

Client Sample ID: PDI-SG-B122-BL1
Date Collected: 04/11/18 14:06
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:42	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B122-BL1
Date Collected: 04/11/18 14:06
Date Received: 04/13/18 13:40

Lab Sample ID: 580-76598-16
Matrix: Solid
Percent Solids: 48.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272683	05/02/18 00:42	CJ	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:47	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:06	FCW	TAL SEA

Client Sample ID: PDI-SG-B122-BL1-D
Lab Sample ID: 580-76598-17
Date Collected: 04/11/18 14:06
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:53	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271557	04/17/18 11:23	APR	TAL SEA

Client Sample ID: PDI-SG-B122-BL1-D
Lab Sample ID: 580-76598-17
Date Collected: 04/11/18 14:06
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 50.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272683	05/02/18 01:02	CJ	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:50	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:08	FCW	TAL SEA

Client Sample ID: PDI-SG-B123-BL1
Lab Sample ID: 580-76598-18
Date Collected: 04/11/18 13:20
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 17:58	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B123-BL1
Lab Sample ID: 580-76598-18
Date Collected: 04/11/18 13:20
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 65.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:12	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		20	272744	05/02/18 12:44	T1W	TAL SEA
Total/NA	Prep	3050B			271598	04/17/18 14:41	ASJ	TAL SEA
Total/NA	Analysis	6020B		10	271773	04/18/18 12:52	FCW	TAL SEA
Total/NA	Prep	7471A			272414	04/27/18 10:52	ASJ	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:11	FCW	TAL SEA

Client Sample ID: PDI-SG-B126-BL1
Lab Sample ID: 580-76598-19
Date Collected: 04/11/18 15:18
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:03	SPP	TAL SEA

Client Sample ID: PDI-SG-B126-BL1
Lab Sample ID: 580-76598-19
Date Collected: 04/11/18 15:18
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B126-BL1
Lab Sample ID: 580-76598-19
Date Collected: 04/11/18 15:18
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 39.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:13	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272683	05/02/18 01:22	CJ	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 09:57	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:34	FCW	TAL SEA

Client Sample ID: PDI-SG-B136-BL1
Lab Sample ID: 580-76598-20
Date Collected: 04/11/18 16:43
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:09	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B136-BL1
Lab Sample ID: 580-76598-20
Date Collected: 04/11/18 16:43
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 40.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272269	04/25/18 15:15	TTN	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272683	05/02/18 01:42	CJ	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:01	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:36	FCW	TAL SEA

Client Sample ID: PDI-SG-B101-BL1
Lab Sample ID: 580-76598-21
Date Collected: 04/11/18 09:43
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:14	SPP	TAL SEA

Client Sample ID: PDI-SG-B101-BL1
Lab Sample ID: 580-76598-21
Date Collected: 04/11/18 09:43
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	271557	04/17/18 11:23	APR	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B101-BL1
Lab Sample ID: 580-76598-21
Date Collected: 04/11/18 09:43
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 38.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/26/18 22:02	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 09:22	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:25	FCW	TAL SEA

Client Sample ID: PDI-SG-B105-BL1
Lab Sample ID: 580-76598-22
Date Collected: 04/11/18 10:44
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:42	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B105-BL1
Lab Sample ID: 580-76598-22
Date Collected: 04/11/18 10:44
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 47.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/26/18 23:11	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:04	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:38	FCW	TAL SEA

Client Sample ID: PDI-SG-B107-BL1
Lab Sample ID: 580-76598-23
Date Collected: 04/11/18 11:31
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:47	SPP	TAL SEA

Client Sample ID: PDI-SG-B107-BL1
Lab Sample ID: 580-76598-23
Date Collected: 04/11/18 11:31
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B107-BL1
Lab Sample ID: 580-76598-23
Date Collected: 04/11/18 11:31
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 44.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/26/18 23:56	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:08	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:46	FCW	TAL SEA

Client Sample ID: PDI-SG-B109-BL1
Lab Sample ID: 580-76598-24
Date Collected: 04/11/18 13:19
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:52	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B109-BL1
Lab Sample ID: 580-76598-24
Date Collected: 04/11/18 13:19
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 41.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/27/18 00:18	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:12	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:48	FCW	TAL SEA

Client Sample ID: PDI-SG-B116-BL1
Lab Sample ID: 580-76598-25
Date Collected: 04/12/18 10:22
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 18:57	SPP	TAL SEA

Client Sample ID: PDI-SG-B116-BL1 — **Lab Sample ID: 580-76598-25**
Date Collected: 04/12/18 10:22 — **Matrix: Solid**
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B116-BL1 — **Lab Sample ID: 580-76598-25**
Date Collected: 04/12/18 10:22 — **Matrix: Solid**
Date Received: 04/13/18 13:40 — **Percent Solids: 70.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/27/18 00:41	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:16	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:50	FCW	TAL SEA

Client Sample ID: PDI-SG-B131-BL1 — **Lab Sample ID: 580-76598-26**
Date Collected: 04/12/18 16:05 — **Matrix: Solid**
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 19:02	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B131-BL1 — **Lab Sample ID: 580-76598-26**
Date Collected: 04/12/18 16:05 — **Matrix: Solid**
Date Received: 04/13/18 13:40 — **Percent Solids: 42.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/27/18 01:25	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:20	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:52	FCW	TAL SEA

Client Sample ID: PDI-SG-B130-BL1 — **Lab Sample ID: 580-76598-27**
Date Collected: 04/12/18 15:02 — **Matrix: Solid**
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 19:07	SPP	TAL SEA

Client Sample ID: PDI-SG-B130-BL1

Lab Sample ID: 580-76598-27
Date Collected: 04/12/18 15:02
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B130-BL1

Lab Sample ID: 580-76598-27
Date Collected: 04/12/18 15:02
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 50.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		2	272350	04/27/18 01:48	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:24	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:55	FCW	TAL SEA

Client Sample ID: PDI-SG-B120-BL1

Lab Sample ID: 580-76598-28
Date Collected: 04/12/18 11:12
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 19:13	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA
Total/NA	Analysis	D7928/D6913		1	272241	04/25/18 13:33	HJM	TAL SEA

Client Sample ID: PDI-SG-B120-BL1

Lab Sample ID: 580-76598-28
Date Collected: 04/12/18 11:12
Matrix: Solid
Date Received: 04/13/18 13:40
Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/27/18 02:10	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:28	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:57	FCW	TAL SEA

Client Sample ID: PDI-SG-B120-BL1-D

Lab Sample ID: 580-76598-29
Date Collected: 04/12/18 11:12
Matrix: Solid
Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	272303	04/24/18 19:18	SPP	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-76598-1

Client Sample ID: PDI-SG-B120-BL1-D

Lab Sample ID: 580-76598-29

Date Collected: 04/12/18 11:12

Matrix: Solid

Date Received: 04/13/18 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	271503	04/16/18 15:24	TTN	TAL SEA

Client Sample ID: PDI-SG-B120-BL1-D

Lab Sample ID: 580-76598-29

Date Collected: 04/12/18 11:12

Matrix: Solid

Date Received: 04/13/18 13:40

Percent Solids: 71.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			272275	04/25/18 15:29	KMS	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	272350	04/27/18 02:32	ADB	TAL SEA
Total/NA	Prep	3050B			271834	04/19/18 15:23	ASJ	TAL SEA
Total/NA	Analysis	6020B		5	271997	04/20/18 10:47	FCW	TAL SEA
Total/NA	Prep	7471A			272418	04/27/18 12:06	PAB	TAL SEA
Total/NA	Analysis	7471A		1	272528	04/27/18 15:59	FCW	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: AECOM
TestAmerica Job ID: 580-76598-1
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

Sample Summary

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

TestAmerica Job ID: 580-76598-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-76598-1	PDI-SG-B125-BL1	Solid	04/11/18 17:02	04/13/18 13:40
580-76598-2	PDI-SG-B124-BL1	Solid	04/11/18 16:16	04/13/18 13:40
580-76598-3	PDI-SG-B118-BL1	Solid	04/11/18 15:22	04/13/18 13:40
580-76598-4	PDI-SG-B140-BL1	Solid	04/12/18 10:15	04/13/18 13:40
580-76598-5	PDI-SG-B139-BL1	Solid	04/12/18 11:27	04/13/18 13:40
580-76598-6	PDI-SG-B144-BL1	Solid	04/12/18 13:03	04/13/18 13:40
580-76598-7	PDI-SG-B146-BL1	Solid	04/12/18 14:30	04/13/18 13:40
580-76598-8	PDI-SG-B147-BL1	Solid	04/12/18 15:45	04/13/18 13:40
580-76598-9	PDI-SG-B149-BL1	Solid	04/12/18 16:45	04/13/18 13:40
580-76598-10	PDI-SG-B134-BL1	Solid	04/12/18 16:59	04/13/18 13:40
580-76598-11	PDI-SG-B121-BL1	Solid	04/12/18 12:22	04/13/18 13:40
580-76598-12	PDI-SG-B127-BL1	Solid	04/12/18 13:59	04/13/18 13:40
580-76598-13	PDI-SG-B111-BL1	Solid	04/11/18 09:40	04/13/18 13:40
580-76598-14	PDI-SG-B113-BL1	Solid	04/11/18 10:42	04/13/18 13:40
580-76598-15	PDI-SG-B119-BL1	Solid	04/11/18 11:34	04/13/18 13:40
580-76598-16	PDI-SG-B122-BL1	Solid	04/11/18 14:06	04/13/18 13:40
580-76598-17	PDI-SG-B122-BL1-D	Solid	04/11/18 14:06	04/13/18 13:40
580-76598-18	PDI-SG-B123-BL1	Solid	04/11/18 13:20	04/13/18 13:40
580-76598-19	PDI-SG-B126-BL1	Solid	04/11/18 15:18	04/13/18 13:40
580-76598-20	PDI-SG-B136-BL1	Solid	04/11/18 16:43	04/13/18 13:40
580-76598-21	PDI-SG-B101-BL1	Solid	04/11/18 09:43	04/13/18 13:40
580-76598-22	PDI-SG-B105-BL1	Solid	04/11/18 10:44	04/13/18 13:40
580-76598-23	PDI-SG-B107-BL1	Solid	04/11/18 11:31	04/13/18 13:40
580-76598-24	PDI-SG-B109-BL1	Solid	04/11/18 13:19	04/13/18 13:40
580-76598-25	PDI-SG-B116-BL1	Solid	04/12/18 10:22	04/13/18 13:40
580-76598-26	PDI-SG-B131-BL1	Solid	04/12/18 16:05	04/13/18 13:40
580-76598-27	PDI-SG-B130-BL1	Solid	04/12/18 15:02	04/13/18 13:40
580-76598-28	PDI-SG-B120-BL1	Solid	04/12/18 11:12	04/13/18 13:40
580-76598-29	PDI-SG-B120-BL1-D	Solid	04/12/18 11:12	04/13/18 13:40

Walker, M Elaine

From: Dahl, Amy <amy.dahl@aecom.com>
Sent: Monday, April 16, 2018 10:06 AM
To: Walker, M Elaine
Cc: Mixon, Karen; Cook, Chelsey; McCoog, Michaela
Subject: FW: TestAmerica sample confirmation files from 580-76598-1 Portland Harbor Pre-Remedial Design
Attachments: COC 580-76598 (201804131502).pdf; SampleLoginAck_580-76598-1 [Std_Tal_Login_Ack].pdf

-External Email-

Hi Elaine, that is correct. The sample label IDs are correct, not the COC. Please cross out the incorrect sample ID on the COC and enter the sample label ID with initials, date, and "confirmed by AECOM".

Thank you,

Amy Dahl, PhD
Chemist, Environment, Pacific Northwest
D +1-206-438-2261
amy.dahl@aecom.com

AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101, United States
T +1-206-438-2700
aecom.com

From: Walker, Elaine [mailto:elaine.walker@testamericainc.com]
Sent: Friday, April 13, 2018 5:30 PM
To: Dahl, Amy; Cook, Chelsey; Mixon, Karen
Subject: TestAmerica sample confirmation files from 580-76598-1 Portland Harbor Pre-Remedial Design

Hello,

Attached please find the sample confirmation files for job 580-76598-1; Portland Harbor Pre-Remedial Design for the Seattle data.

Please note - The following samples did not match between the COC and the sample containers: Sample PDI-SG-B119-BL1, sampled on 4/11/2018 @ 14:06 is listed on the COC, but the containers are labeled as PDI-SG-B122-BL1. Sample PDI-SG-B119-BL1-D, sampled on 4/11/2018 @ 14:06 is listed on the COC, but the containers are labeled as PDI-SG-B122-BL1-D. The samples were logged per the sample containers. Please confirm if this is correct.

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

ELAINE M WALKER

Walker, M Elaine

From: Cook, Chelsey <Chelsey.Cook@aecom.com>
Sent: Tuesday, April 17, 2018 1:34 PM
To: Walker, M Elaine
Cc: Dahl, Amy
Subject: RE: TestAmerica sample confirmation files from 580-76598-1 Portland Harbor Pre-Remedial Design

External Email

Hi Elaine,

We heard from the field team that the last two samples B120 and B120D should have collection dates of 4/12/18 not 4/13/18 (I checked their log books and confirmed). Could you also cross out the collection date and write the correct date, initial and write "confirmed by AECOM" on it as well.

This will change the sample date on the acknowledgments as well – please provide the revised ones.

Thanks!

Chelsey Cook
Staff Chemist
D 1-206-438-2010
chelsey.cook@aecom.com

AECOM
1111 3rd Avenue, Suite 1600
Seattle, WA 98101, USA
T +206-438-2700
www.aecom.com

From: Dahl, Amy
Sent: Monday, April 16, 2018 10:06 AM
To: Walker, M Elaine <Elaine.Walker@testamericainc.com> (Elaine.Walker@testamericainc.com)
Cc: Mixon, Karen; Cook, Chelsey; McCoog, Michaela
Subject: FW: TestAmerica sample confirmation files from 580-76598-1 Portland Harbor Pre-Remedial Design

Hi Elaine, that is correct. The sample label IDs are correct, not the COC. Please cross out the incorrect sample ID on the COC and enter the sample label ID with initials, date, and "confirmed by AECOM".

Thank you,

Amy Dahl, PhD
Chemist, Environment, Pacific Northwest
D +1-206-438-2261
amy.dahl@aecom.com

AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101, United States

T +1-206-438-2700
aecom.com

From: Walker, Elaine [mailto:elaine.walker@testamericainc.com]
Sent: Friday, April 13, 2018 5:30 PM
To: Dahl, Amy; Cook, Chelsey; Mixon, Karen
Subject: TestAmerica sample confirmation files from 580-76598-1 Portland Harbor Pre-Remedial Design

Hello,

Attached please find the sample confirmation files for job 580-76598-1; Portland Harbor Pre-Remedial Design for the Seattle data.

Please note - The following samples did not match between the COC and the sample containers: Sample PDI-SG-B119-BL1, sampled on 4/11/2018 @ 14:06 is listed on the COC, but the containers are labeled as PDI-SG-B122-BL1. Sample PDI-SG-B119-BL1-D, sampled on 4/11/2018 @ 14:06 is listed on the COC, but the containers are labeled as PDI-SG-B122-BL1-D. The samples were logged per the sample containers. Please confirm if this is correct.

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

ELAINE M WALKER
Project Manager

TestAmerica Seattle
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 253.248.4972
www.testamericainc.com

Reference: [239418]
Attachments: 2

Revised 4/16/2018 -ew

580-76598 Chain of Custody

SURFACE SEDIMENT CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 Ph: 253-922-2310 Fax: 253-922-5047			
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study	Project Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010 Analysis Turnaround Time Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____	Site Contact: Jennifer Ray / Michaela McCoog Laboratory Contact: Elaine-Walker	Date: 4/13/18 Carrier: Currier COC No: 1 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont	Archive Requested	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 4020B, 2471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B125-BL1	4/11/2018	17:02	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B124-BL1	4/11/2018	16:16	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B118-BL1	4/11/2018	15:22	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B140-BL1	4/12/2018	10:15	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B139-BL1	4/12/2018	11:27	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B144-BL1	4/12/2018	13:03	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B146-BL1	4/12/2018	14:30	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B147-BL1	4/12/2018	15:45	SE	MS/MSD	NM	12		x	x	x	x	x	x						
PDI-SG-B149-BL1	4/12/2018	16:45	SE		ED	6		x	x	x	x	x	x						
PDI-SG-B134-BL1	4/12/2018	16:59	SE		ED	6		x	x	x	x	x	x						
PDI-SG-B121-BL1	4/12/2018	12:22	SE		ED	6		x	x	x	x	x	x						
PDI-SG-B127-BL1	4/12/2018	13:59	SE		ED	6		x	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:

	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	AECOM	4/13/18 1215		M.E.	4/13/18 1215
Relinquished by:	M.E.	4/13/18 1340		A Fox	4/13/18 1340
Relinquished by:					

Revised 4/16/18 - sw

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 AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study	Project Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010 Analysis Turnaround Time Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____	Site Contact: Jennifer Ray / Michaela McCoog Laboratory Contact: Elaine-Walker	Date: 4/13/18 Carrier: courier
			COC No: 2 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Filtering	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B111-BL1	4/11/2018	9:40	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B113-BL1	4/11/2018	10:42	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B119-BL1	4/11/2018	11:34	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B122-BL1	4/11/2018	14:06	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B122-BL1-D	4/11/2018	14:06	SE		NM	6		X	X	X		X	X						
PDI-SG-B123-BL1	4/11/2018	13:20	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B126-BL1	4/11/2018	15:18	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B136-BL1	4/11/2018	16:43	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B101-BL1	4/11/2018	9:43	SE	MS/MSD	ED	12		X	X	X	X	X	X						
PDI-SG-B105-BL1	4/11/2018	10:44	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B107-BL1	4/11/2018	11:31	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B109-BL1	4/11/2018	13:19	SE		ED	6		X	X	X	X	X	X						

122 - sw 4/16/18 confirmed by AECOM

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:

Relinquished by: Michaela McCoog	Company: AECOM	Date/Time: 4-13-18 1215	Received by: Jennifer Ray	Company: M.E.	Date/Time: 4/13/18 1215
Relinquished by: Jennifer Ray	Company: M-E-	Date/Time: 4/13/18 1340	Received by:	Company: TA-SEA	Date/Time: 4/13/18 1340
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Revised 4/16/18 - EW

SURFACE SEDIMENT CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 Ph: 253-922-2310 Fax: 253-922-5047	Project Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010 Analysis Turnaround Time Calendar (C) or Work Days (W)	Site Contact: Jennifer Ray / Michaela McCoog Laboratory Contact: Elaine-Walker Date: 4/13/18 Carrier:
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study	☐ 21 days ☐ Other _____	COC No: 2 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Perform MS/MSD (Y/N)	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B116-BL1	4/12/2018	10:22	SE		ED	6		x	x	x	x	x	x						
PDI-SG-B131-BL1	4/12/2018	16:05	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B130-BL1	4/12/2018	15:02	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B120-BL1	4/13/2018	11:12	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B130-BL1-D	4/13/2018	11:12	SE		ED	6		X	X	X		X	X						
~~PDI-SG-B075-BL1~~ #4																			

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 X Disposal By Lab X Archive For 12 Months

Special Instructions/QC Requirements & Comments:

Relinquished by: Michael McCoog	Company: AECOM	Date/Time: 4-13-18 1215	Received by: Jessica Mae	Company: M.E.	Date/Time: 4/13/18 1215
Relinquished by: Jessica Mae	Company: M.E.	Date/Time: 4/13/18 1340	Received by:	Company: TA-POR	Date/Time: 4/13/18 1340
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Revision 2: 04/18/18 - SW - Confirmed by AECOM

Revised 4/16/2018 -SW

SURFACE SEDIMENT
CHAIN OF CUSTODY

580-78598 Chain of Custody

TestAmerica-Seattle
5755-8th-Street-East
Tacoma, WA 98424-1317
Ph: 253-922-2310 Fax: 253-922-5047

Client Contact
AECOM
1111 3rd Ave Suite 1600
Seattle, WA 98101
Phone: (206) 438-2700 Fax: 1+(866) 495-5288
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
Portland, OR
Project #: 60566335 Study: Study

Project Contact: Amy Dahl / Chelsey Cook
Tel: (206) 438-2261 / (206) 438-2010
Analysis Turnaround Time
Calendar (C) or Work Days (W)
☐ 21 days
☐ Other ______

Site Contact: Jennifer Ray / Michaela McCaig
Laboratory Contact: Elaine-Walker
Date: 4/13/18
Carrier: Carrier
COC No: 1 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	PCB Congeners 1668A	PCDD/Fs 1613B	LTH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D4912	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B125-BL1	4/11/2018	17:02	SE		NM	6	x	x	x	x	x	x						
PDI-SG-B124-BL1	4/11/2018	16:16	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B118-BL1	4/11/2018	15:22	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B140-BL1	4/12/2018	10:15	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B139-BL1	4/12/2018	11:27	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B144-BL1	4/12/2018	13:03	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B146-BL1	4/12/2018	14:30	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B147-BL1	4/12/2018	15:45	SE	MS/MSD	NM	12	X	X	X	X	X	X						
PDI-SG-B149-BL1	4/12/2018	16:45	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B134-BL1	4/12/2018	16:59	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B121-BL1	4/12/2018	12:22	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B127-BL1	4/13/2018	13:59	SE		ED	6	X	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:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AECOM	4/13/18 1215	[signature]	M.E.	4/13/18 1215
[signature]	M.E.	4/13/18 1340	[signature]	TA FOR	4/13/18 1340

Revision 2: 04/18/18 - sw - confirmed by AECOM
Revised 4/16/18 - sw

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
AECOM
1111 3rd Ave Suite 1600
Seattle, WA 98101
Phone: (206) 438-2700 Fax: 1+(866) 495-5288
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
Portland, OR
Project #: 60566335 Study: Study

Project Contacts: Amy Dahl / Chelsey Cook
Tel: (206) 438-2261 / (206) 438-2010
Analysis Turnaround Time
Calendar (C) or Work Days (W) ______
☐ 21 days
☐ Other ______

Site Contact: Jennifer Rey / Michaela McCoeg
Laboratory Contact: Elaine-Walker
Date: 4/13/18
Carrier: Courier
COC No: 2 of 3 COC's

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020A, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B111-BL1	4/11/2018	9:40	SE		NM	6	x	x	x	x	x	x						
PDI-SG-B113-BL1	4/11/2018	10:42	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B119-BL1	4/11/2018	11:34	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B1~~14~~ 122-BL1 → sw 4/16/18 confirmed by AECOM	4/11/2018	14:06	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B1~~14~~ 122-BL1-D	4/11/2018	14:06	SE		NM	6	X	X	X		X	X						
PDI-SG-B123-BL1	4/11/2018	13:20	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B126-BL1	4/11/2018	15:18	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B136-BL1	4/11/2018	16:43	SE		NM	6	X	X	X	X	X	X						
PDI-SG-B101-BL1	4/11/2018	9:43	SE	MS/MSD	ED	12	X	X	X	X	X	X						
PDI-SG-B105-BL1	4/11/2018	10:44	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B107-BL1	4/11/2018	11:31	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B109-BL1	4/11/2018	13:19	SE		ED	6	X	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:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michael McVey	AECOM	4-13-18 1215	[signature]	M.E.	4/13/18 1215
[signature]	M.E.	4/13/18 1340	[signature]	TA-SEA	4/13/18 1340

Revision 2: 04/18/18 - SW Confirmed by AECom
Revised 4/16/18 - SW

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
AECOM
1111 3rd Ave Suite 1600
Seattle, WA 98101
Phone: (206) 438-2700 Fax: 1-(866) 495-5288
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
Portland, OR
Project #: 60566335 Study: Study

Project Contact: Amy Dahl / Chelsey Cook
Tel: (206) 438-2251 / (206) 438-2010
Analysis Turnaround Time
Calendar (C) or Work Days (W)
☐ 21 days
☐ Other ________

Site Contact: Jennifer Ray / Michaela McCoog
Laboratory Contact: Elaine-Walker
Date: 7/13/18
Carrier:
COC No: 3 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B116-BL1	4/12/2018	10:22	SE		ED	6	x	x	x	x	x	x						
PDI-SG-B131-BL1	4/12/2018	16:05	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B130-BL1	4/12/2018	15:02	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B130-BL1 (~~B110~~)	4/13/2018 (~~4/12/2018~~)	11:13	SE		ED	6	X	X	X	X	X	X						
PDI-SG-B130-BL1-D (~~B110~~)	4/13/2018 (~~4/12/2018~~)	11:12	SE		ED	6	X	X	X		X	X						
~~PDI-SG-B673-BL1~~																		

SW 4/18/18 Confirmed by AECom

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AECom	4-13-18 1215	[signature]	M.E.	4/13/18 1215
[signature]	M.E.	4/13/18 1340	[signature]	TA-POR	4/13/18 1340

580-76598 Chain of Custody

SURFACE SEDIMENT CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010**	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date:** 4/13/18 **Carrier:** currier
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study	**Analysis Turnaround Time** Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____		COC No: 1 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B125-BL1	4/11/2018	17:02	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B124-BL1	4/11/2018	16:16	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B118-BL1	4/11/2018	15:22	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B140-BL1	4/12/2018	10:15	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B139-BL1	4/12/2018	11:27	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B144-BL1	4/12/2018	13:03	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B146-BL1	4/12/2018	14:30	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B147-BL1	4/12/2018	15:45	SE	MS/MSD	NM	12		X	X	X	X	X	X						
PDI-SG-B149-BL1	4/12/2018	16:45	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B134-BL1	4/12/2018	16:59	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B121-BL1	4/12/2018	12:22	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B127-BL1	4/12/2018	13:59	SE		ED	6		X	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 X sposal By Lab X rchive For 12 Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: AECOM	Date/Time: 4/13/18 1215	Received by:	Company: M.E.	Date/Time: 4/13/18 1215
Relinquished by:	Company: M.E.	Date/Time: 4/13/18 1340	Received by:	Company: FDR	Date/Time: 4/13/18 1340
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

SURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010** **Analysis Turnaround Time** Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date:** 4/13/18 **Carrier:** courier COC No: 2 of 3 COCs
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study			

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B111-BL1	4/11/2018	9:40	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B113-BL1	4/11/2018	10:42	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B119-BL1	4/11/2018	11:34	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B119-BL1	4/11/2018	14:06	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B119-BL1-D	4/11/2018	14:06	SE		NM	6		X	X	X		X	X						
PDI-SG-B123-BL1	4/11/2018	13:20	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B126-BL1	4/11/2018	15:18	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B136-BL1	4/11/2018	16:43	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B101-BL1	4/11/2018	9:43	SE	MS/MSD	ED	12		X	X	X	X	X	X						
PDI-SG-B105-BL1	4/11/2018	10:44	SE		ED	4		X	X	X	X	X	X						
PDI-SG-B107-BL1	4/11/2018	11:31	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B109-BL1	4/11/2018	13:19	SE		ED	6		X	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 X Disposal By Lab X Archive For **12** Months

Special Instructions/QC Requirements & Comments:

Relinquished by: Michael McCoy	Company: AECOM	Date/Time: 4-13-18 1215	Received by: Jessica Nye	Company: M.E.	Date/Time: 4/13/18 1215
Relinquished by: Jessica Nye	Company: M.E.	Date/Time: 4/13/18 1340	Received by:	Company: TA-POR	Date/Time: 4/13/18 1340
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

SURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010** **Analysis Turnaround Time** Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date:** 4/13/18 **Carrier:**
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study			COC No: 3 of 3 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B116-BL1	4/12/2018	10:22	SE		ED	6		x	x	x	x	x	x						
PDI-SG-B131-BL1	4/12/2018	16:05	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B130-BL1	4/12/2018	15:02	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B120-BL1	4/13/2018	11:12	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B120-BL1-D	4/13/2018	11:12	SE		ED	6		X	X	X		X	X						
~~PDI-SG-B173-BL1~~ #																			

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 X Disposal By Lab X Archive For **12** Months

Special Instructions/QC Requirements & Comments:

Relinquished by: Michah Mc	Company: AECOM	Date/Time: 4-13-18 1215	Received by: Jessica M	Company: M. E.	Date/Time: 4/13/18 1215
Relinquished by: Jessica M	Company: M. E.	Date/Time: 4/13/18 1340	Received by:	Company: TA-POR	Date/Time: 4/13/18 1340
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Revised 4/18/18 -EW
Confirmed by AECOM

580-76598 Chain of Custody

SURFACE SEDIMENT CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010**	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date:** 4/13/18 **Carrier:** Courier	COC No: 1 of 3 COCs
Client Contact AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study	**Analysis Turnaround Time** Calendar (C) or Work Days (W) ☐ 21 days ☐ Other _____			

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B125-BL1	4/11/2018	17:02	SE		NM	6		x	x	x	x	x	x						
PDI-SG-B124-BL1	4/11/2018	16:16	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B118-BL1	4/11/2018	15:22	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B140-BL1	4/12/2018	10:15	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B139-BL1	4/12/2018	11:27	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B144-BL1	4/12/2018	13:03	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B146-BL1	4/12/2018	14:30	SE		NM	6		X	X	X	X	X	X						
PDI-SG-B147-BL1	4/12/2018	15:45	SE	MS/MSD	NM	12		X	X	X	X	X	X						
PDI-SG-B149-BL1	4/12/2018	16:45	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B134-BL1	4/12/2018	16:59	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B121-BL1	4/12/2018	12:22	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B127-BL1	4/12/2018	13:59	SE		ED	6		X	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 X Disposal By Lab X Archive For 12 Months

Special Instructions/QC Requirements & Comments:

3.2, 4.4
1.8, 4.1
2.1, 2.5

Relinquished by:	Company: AECOM	Date/Time: 4/13/18 1215	Received by:	Company: M.E.	Date/Time: 4/13/18 1215
Relinquished by:	Company: M.E.	Date/Time: 4/13/18 1340	Received by:	Company: TA FOR	Date/Time: 4/13/18 1340
Relinquished by:	Company: TA FOR	Date/Time: 4/13/18 1705	Received by:	Company: TASea	Date/Time: 4-14-18 1010

TRH = -1.6/-1.8, -1.0/-1.2, -0.6/-8

SURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010**	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date:** 4/13/18 **Carrier:** courier	COC No: 2 of 3 COCs

Client Contact	**Analysis Turnaround Time**
AECOM 1111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Study	Calendar (C) or Work Days (W) _____ ☐ 21 days ☐ Other _____

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B					Sample Specific Notes:
PDI-SG-B111-BL1	4/11/2018	9:40	SE		NM	6		x	x	x	x	x	x										
PDI-SG-B113-BL1	4/11/2018	10:42	SE		NM	6		X	X	X	X	X	X										
PDI-SG-B119-BL1	4/11/2018	11:34	SE		NM	6		X	X	X	X	X	X										
PDI-SG-B119-BL1	4/11/2018	14:06	SE		NM	6		X	X	X	X	X	X										
PDI-SG-B119-BL1-D	4/11/2018	14:06	SE		NM	6		X	X	X		X	X										
PDI-SG-B123-BL1	4/11/2018	13:20	SE		NM	6		X	X	X	X	X	X										
PDI-SG-B126-BL1	4/11/2018	15:18	SE		NM	6		X	X	X	X	X	X										
PDI-SG-B136-BL1	4/11/2018	16:43	SE		NM	6		X	X	X	X	X	X										
PDI-SG-B101-BL1	4/11/2018	9:43	SE	MS/MSD	ED	12		X	X	X	X	X	X										
PDI-SG-B105-BL1	4/11/2018	10:44	SE		ED	6		X	X	X	X	X	X										
PDI-SG-B107-BL1	4/11/2018	11:31	SE		ED	6		X	X	X	X	X	X										
PDI-SG-B109-BL1	4/11/2018	13:19	SE		ED	6		X	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:

Relinquished by: Michael McCoog	Company: AECOM	Date/Time: 4-13-18 1215	Received by:	Company: M.E.	Date/Time: 4/13/18 1215
Relinquished by:	Company: M.E.	Date/Time: 4/13/18 1340	Received by:	Company: TA-POR	Date/Time: 4/13/18 1340
Relinquished by:	Company: TA-POR	Date/Time: 4/13/18 1700	Received by:	Company: TASea	Date/Time: 4.14.18 1010

SURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**	**Project Contact: Amy Dahl / Chelsey Cook** **Tel: (206) 438-2261 / (206) 438-2010**	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date:** 4/13/18 **Carrier:**	COC No: 3 of 3 COCs

Client Contact

AECOM
1111 3rd Ave Suite 1600
Seattle, WA 98101
Phone: (206) 438-2700 Fax: 1+(866) 495-5288
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
Portland, OR
Project #: 60566335 Study: Study

Analysis Turnaround Time
Calendar (C) or Work Days (W) _____
☐ 21 days
☐ Other _____

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCB Congeners 1668A	PCDD/Fs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 6020B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060	Archive Archive -20 C	WQ - PCB Congeners 1668A	WQ - PCDD/Fs 1613B	WQ - TPH Diesel NWTPH-Dx	WQ - Metals, Mercury 6020B, 7470	WQ - Total Organic Carbon SM5310B	Sample Specific Notes:
PDI-SG-B116-BL1	4/12/2018	10:22	SE		ED	6		x	x	x	x	x	x						
PDI-SG-B131-BL1	4/12/2018	16:05	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B130-BL1	4/12/2018	15:02	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B120-BL1	4/13/2018	11:12	SE		ED	6		X	X	X	X	X	X						
PDI-SG-B120-BL1-D	4/13/2018	11:12	SE		ED	6		X	X	X		X	X						
~~PDI-SG-B173-BL1~~ #								Confirmed by AECOM											

SW 4/18/18

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 X Disposal By Lab X Archive For **12** Months

Special Instructions/QC Requirements & Comments:

	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by: Michael Mc	AECOM	4-13-18 1215	Jessica M	M.E.	4/13/18 1215
Relinquished by: Jessica M	M.E.	4/13/18 1340		TA-POR	4/13/18 1340
Relinquished by:	TA-POR	4/13/18 1700	Terry Fletcher	TASea	4-14-18 1010

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-76598-1

Login Number: 76598
List Number: 1
Creator: Gonzales, Steve

List Source: TestAmerica Seattle

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