TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 580-79099-1
Client Project/Site: Portland Harbor Pre-Remedial Design
Revision: 1

For:
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Authorized for release by:
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Narrative

CASE NARRATIVE
Client: AECOM
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REVISION 1: NOVEMBER 8, 2018
This revision was required to correct the PCB-1260 results for the following samples: PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24) and PDI-SC-S127-0to2 (580-79099-26). In addition, narrative comments were added to the 8270 SIM, PCB and TOC sections. These changes are in bold type.

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
Thirty-one samples were received on 7/25/2018 1:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 0.7º C, 1.3º C, 2.7º C, 3.0º C, 3.4º C and 4.9º 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 requested on a rush TAT and performed by TestAmerica Seattle.

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.

SEMIVOLATILE ORGANIC COMPOUNDS - SELECTED ION MODE (SIM)
Samples PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29) and PDI-SC-S095-0to2D (580-79099-30) were analyzed for semivolatile organic compounds - Selected Ion Mode (SIM) in accordance with SW846 8270D_SIM. The samples were prepared on 07/27/2018 and 07/29/2018 and analyzed on 07/28/2018, 07/29/2018, 07/30/2018, 08/02/2018, 08/06/2018 and 08/07/2018.

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Several analytes were detected in method blank MB 580-280203/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Target analyte concentrations in the MB were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

2-Methylnaphthalene, Naphthalene and Phenanthrene were detected in method blank MB 580-280231/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Target analyte concentrations are less than the ½ the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not warranted.

Phenanthrene was detected in method blank MB 580-280319/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Several analytes were detected in method blank MB 580-280319/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. The target analyte concentrations were less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Indeno[1,2,3-cd]pyrene failed the recovery criteria high for LCS 580-280203/2-A. This random marginal exceedance does not indicate a systematic control problem. Qualified results have been reported.

Chrysene and Naphthalene failed the recovery criteria low for the MS of sample PDI-SC-S154-1to3MS (580-79099-24) in batch 580-280717. Several analytes failed the recovery criteria low for the MSD of sample PDI-SC-S154-1to3MSD (580-79099-24) in batch 580-280717. Several analytes exceeded the RPD limit. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Several analytes failed the recovery criteria low for the MS of sample PDI-SC-S061-0to3MS (580-79099-7) in batch 580-**280341**. Fluoranthene and Pyrene failed the recovery criteria low for the MSD of sample PDI-SC-S061-0to3MSD (580-79099-7) in batch 580-280341. Benzo[a]pyrene, Benzo[b]fluoranthene and Chrysene exceeded the RPD limit. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. **The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.**

Benzo[a]anthracene failed the recovery criteria low for the MS of sample PDI-SC-S061-0to3MS (580-79099-7) in batch 580-280894. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The continuing calibration verification (CCV) associated with batch 580-280341 recovered above the upper control limit for Benzo[a]anthracene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

11/20 ALD. Benzo(a)anthracene not reported from this run. Benzo(b)fluoranthene out high and all detections were qualified during validation.

The following samples were diluted due to the nature of the sample matrix: PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-2to4D (580-79099-29), PDI-SC-S095-0to2D (580-79099-30), (580-79099-B-7-C MS) and (580-79099-B-7-D MSD). Elevated reporting limits (RLs) are provided.

The following samples were diluted to bring the concentration of target analytes within the calibration range: PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S127-0to2 (580-79099-26) and PDI-SC-S095-0to2D (580-79099-30). Elevated reporting limits (RLs) are

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provided.

The following samples were re-analyzed due to high Benzo[a]anthracene in the initial analysis' CCVIS: PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S154-0to1 (580-79099-23),PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29), PDI-SC-S095-0to2D (580-79099-30), (580-79099-B-7-C MS) and (580-79099-B-7-D MSD).

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

SEMIVOLATILE ORGANIC COMPOUNDS - SELECTED ION MODE (SIM) - RINSE BLANK

Sample PDI-RB-SS-180724 (580-79099-31) was analyzed for semivolatile organic compounds - Selected Ion Mode (SIM) in accordance with 8270D SIM. The sample was prepared on 07/29/2018 and analyzed on 07/31/2018.

Acenaphthene failed the recovery criteria low for LCSD 580-280340/3-A. Anthracene and Pyrene exceeded the RPD limit. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Samples PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29) and PDI-SC-S095-0to2D (580-79099-30) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA sw-846 method 8082A. The samples were prepared on 07/27/2018 and 07/28/2018 and analyzed on 07/28/2018, 08/01/2018 and 08/13/2018.

Surrogate recovery for the following samples were outside control limits: PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-1to3MS (580-79099-24MS), PDI-SC-S154-1to3MSD (580-79099-24MSD), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26) and PDI-SC-S127-2to4 (580-79099-27). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis were not performed.

PCB-1016 and PCB-1260 failed the recovery criteria high for the MS of sample PDI-SC-S154-1to3MS (580-79099-24) in batch 580-280527. PCB-1016 and PCB-1260 failed the recovery criteria high for the MSD of sample PDI-SC-S154-1to3MSD (580-79099-24) in batch 580-280527. PCB-1016 exceeded the RPD limit. 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.

The continuing calibration verification (CCV) associated with batch 580-280527 recovered above the upper control limit for PCB-1232. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-3.5to4.8 (580-79099-22) and (CCV 580-280527/2).

The continuing calibration verification (CCV) associated with 580-280273 recovered low and outside the control limits for PCB-1248 on the confirmation column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: PDI-SC-S082-2to4 (580-79099-15) and (CCV 580-280273/3).

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The continuing calibration verification (CCV) associated with 580-280274 recovered low and outside the control limits for PCB-1248, PCB-1016 and PCB-1260 on the confirmation column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), (CCV 580-280274/3) and (CCVIS 580-280274/6).

The continuing calibration verification (CCV) standard associated with batch 580-280274 recovered low and outside acceptance criteria for %D for surrogate DCB Decachlorobiphenyl **on the confirmation column**. Since the %Rec is within the acceptance criteria for the surrogate in the CCV and associated samples, the data have been reported. The following sample is impacted: **PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), (CCV 580-280274/3) and** (CCVIS 580-280274/6).

The continuing calibration verification (CCV) associated with batch 580-281356 recovered above the upper control limit for PCB-1232, PCB-1248 and PCB-1242 on both the confirmation column and the primary column and PCB-1221, PCB-1254, PCB-1016 and PCB-1260 on the confirmation column only. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29), PDI-SC-S095-0to2D (580-79099-30), **MB 580-280286/1-A, LCS 580-280286/2-A,** (CCV 580-281356/2), (CCV 580-281356/3), (CCV 580-281356/4), (CCV 580-281356/5) **and (CCV 580-281356/6).**

The continuing calibration verification (CCV) standard associated with batch 580-281356 recovered high and outside acceptance criteria for %D for surrogate DCB Decachlorobiphenyl on the confirmation column and Tetrachloro-m-xylene on both columns. Sinc the %Rec is within the acceptance criteria for the surrogate in the CCV and associated samples, the data have been reported. The following sample is impacted: The following samples are impacted: PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29), PDI-SC-S095-0to2D (580-79099-30), MB 580-280286/1-A, LCS 580-280286/2-A and (CCV 580-281356/6).

CCB 580-281356/7 failed surrogate recovery on the confirmation column. Surrogate recovery was within limits on the primary column for the CCB. The CCV run before the CCB passed surrogate recovery. The data is reported.

Internal standard (ISTD) response for the following samples exceeded the control limit on Column ZB-CLPesticides-2: PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-1to3 (580-79099-24[MS]) and PDI-SC-S154-1to3 (580-79099-24[MSD]). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to multiple overlapping Aroclors, weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standard used for instrument calibration: PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S154-0to1 (580-79099-23) and PDI-SC-S154-1to3 (580-79099-24). The sample(s) has been quantified and reported with the predominant Aroclor or mixture of Aroclors. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S064-2to3.5 (580-79099-21) and PDI-SC-S127-4to5.6 (580-79099-28). The samples have been quantified and reported as either PCB-1254 or Aroclor 1260; whichever is more prominent. Due to the poor match with the Aroclor standards, there is increased qualitative and quantitative uncertainty associated with this result.

The following samples contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S064-0to2 (580-79099-20) and PDI-SC-S064-3.5to4.8 (580-79099-22).

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The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: PDI-SC-S127-0to2 (580-79099-26). The sample(s) has been quantified and reported as PCB-1260. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

The following sample(s) required a copper clean-up to reduce matrix interferences caused by sulfur. The copper lot number is 615040-BB. The following samples are impacted: PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-1to3 (580-79099-24[MS]), PDI-SC-S154-1to3 (580-79099-24[MSD]), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28) PDI-SC-S127-2to4D (580-79099-29) and PDI-SC-S095-0to2D (580-79099-30).

The %RPD between the primary and confirmation column exceeded 40% for PCB-1254 for the following samples: PDI-SC-S042-4to (580-79099-6), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S154-1to3 (580-79099-24). The lower value(s) has been reported an qualified in accordance with the laboratory's SOP.

The %RPD between the primary and confirmation column exceeded 40% for PCB-1242 and PCB-1260 for the following sample: PDI-SC-S154-0to1 (580-79099-23). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The %RPD between the primary and confirmation column exceeded 40% for PCB-1260 for the following sample: PDI-SC-S127-4to5.6 (580-79099-28). The lower value has been reported and qualified in accordance with the laboratory's SOP.

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

POLYCHLORINATED BIPHENYLS (PCBS) - RINSE BLANK

Sample PDI-RB-SS-180724 (580-79099-31) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The sample w prepared on 07/31/2018 and analyzed on 08/03/2018.

The continuing calibration verification (CCV) associated with 580-280814 recovered low and outside the control limits for PCB-1232, PCB-1248, PCB-1254, PCB-1016 and PCB-1260 on the confirmation column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: PDI-RB-SS-180724 (580-79099-31), (CCV 580-280814/3), (CCV 580-280814/4), (CCV 580-280814/5) and (CCVIS 580-280814/6).

The continuing calibration verification (CCV) standard associated with batch 580-280814 recovered outside acceptance criteria for %D for surrogate DCB Decachlorobiphenyl. Since the %Rec is within the acceptance criteria for the surrogate in the CCV and associated samples, the data have been reported. The following sample is impacted: (CCVIS 580-280814/6).

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

TOTAL ORGANIC CARBON

Samples PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29) and PDI-SC-S095-0to2D (580-79099-30) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 07/31/2018, 08/02/2018 and 08/03/2018.

Job ID: 580-79099-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

Total Organic Carbon - Duplicates exceeded the RSD limit for the triplicate of sample PDI-SC-S154-1to3TRL (580-79099-24).

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

TOTAL ORGANIC CARBON - RINSE BLANK

Sample PDI-RB-SS-180724 (580-79099-31) was analyzed for total organic carbon in accordance with SM 5310B. The samples were analyzed on 07/27/2018.

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

GRAIN SIZE

Samples PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27) and PDI-SC-S127-4to5.6 (580-79099-28) were analyzed for grain size in accordance with ASTM D7928/D6913. The samples were analyzed on 07/27/2018.

Coarse Sand and Gravel exceeded the RPD limit for the duplicate of sample PDI-SC-S082-2to4DU (580-79099-15).

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

PERCENT SOLIDS

Samples PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29) and PDI-SC-S095-0to2D (580-79099-30) were analyzed for percent solids in accordance with ASTM D2216. The samples were analyzed on 07/26/2018.

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

TOTAL SOLIDS @ 70C

Samples PDI-SC-S045-0to2 (580-79099-1), PDI-SC-S045-2to4 (580-79099-2), PDI-SC-S045-4to6 (580-79099-3), PDI-SC-S042-0to2 (580-79099-4), PDI-SC-S042-2to4 (580-79099-5), PDI-SC-S042-4to6 (580-79099-6), PDI-SC-S061-0to3 (580-79099-7), PDI-SC-S061-3to4.5 (580-79099-8), PDI-SC-S061-4.5to6 (580-79099-9), PDI-SC-S066-0to2 (580-79099-10), PDI-SC-S066-2to4 (580-79099-11), PDI-SC-S066-4to5.8 (580-79099-12), PDI-SC-S066-5.8to6.6 (580-79099-13), PDI-SC-S082-0to2 (580-79099-14), PDI-SC-S082-2to4 (580-79099-15), PDI-SC-S082-4to6 (580-79099-16), PDI-SC-S095-0to2 (580-79099-17), PDI-SC-S095-2to4 (580-79099-18), PDI-SC-S095-4to6 (580-79099-19), PDI-SC-S064-0to2 (580-79099-20), PDI-SC-S064-2to3.5 (580-79099-21), PDI-SC-S064-3.5to4.8 (580-79099-22), PDI-SC-S154-0to1 (580-79099-23), PDI-SC-S154-1to3 (580-79099-24), PDI-SC-S154-3to4 (580-79099-25), PDI-SC-S127-0to2 (580-79099-26), PDI-SC-S127-2to4 (580-79099-27), PDI-SC-S127-4to5.6 (580-79099-28), PDI-SC-S127-2to4D (580-79099-29) and PDI-SC-S095-0to2D (580-79099-30) were analyzed for Total Solids @ 70C. The samples were analyzed on 08/03/2018.

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

Qualifiers

GC/MS Semi VOA

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.
*	LCS or LCSD is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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
*	ISTD response or retention time outside acceptable limits
E	Result exceeded calibration range.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: PDI-SC-S045-0to2

Date Collected: 07/23/18 09:55
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-1

Matrix: Solid
Percent Solids: 76.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2.9	J B	6.3	0.57	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Acenaphthene	2.3	J B	6.3	0.76	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Acenaphthylene	2.6	J B	6.3	0.63	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Anthracene	5.6	J B	6.3	0.76	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Benzo[a]anthracene	16	B	6.3	0.96	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Benzo[a]pyrene	20	B	6.3	0.51	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Benzo[b]fluoranthene	24		6.3	0.75	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Benzo[g,h,i]perylene	18		6.3	0.63	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Benzo[k]fluoranthene	10	B	6.3	0.76	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Chrysene	21		6.3	1.9	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Dibenz(a,h)anthracene	3.6	J	6.3	0.91	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Fluoranthene	28		6.3	1.8	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Fluorene	2.3	J B	6.3	0.63	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Indeno[1,2,3-cd]pyrene	19	*	6.3	0.76	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Naphthalene	12	B	6.3	1.0	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Phenanthrene	22	B	6.3	0.87	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5
Pyrene	50	B	6.3	1.2	ug/Kg	☼	07/27/18 09:37	07/28/18 23:42	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*85*		*57 - 120*	*07/27/18 09:37*	*07/28/18 23:42*	*5*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.5	0.42	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1
PCB-1221	ND		2.5	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1
PCB-1232	ND		2.5	0.58	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1
PCB-1242	ND		2.5	0.61	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1
PCB-1248	ND		2.5	0.20	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1
PCB-1254	ND		2.5	0.98	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1
PCB-1260	0.55	J	2.5	0.42	ug/Kg	☼	07/28/18 09:59	08/13/18 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*65*		*54 - 142*	*07/28/18 09:59*	*08/13/18 19:00*	*1*
Tetrachloro-m-xylene	*68*		*58 - 122*	*07/28/18 09:59*	*08/13/18 19:00*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	3100		2000	44	mg/Kg			07/31/18 11:15	1
Total Solids	76.5		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	76	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.1				%			07/27/18 09:40	1
Coarse Sand	1.0				%			07/27/18 09:40	1
Medium Sand	1.7				%			07/27/18 09:40	1
Fine Sand	16.9				%			07/27/18 09:40	1
Silt	64.0				%			07/27/18 09:40	1
Clay	16.2				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S045-2to4

Date Collected: 07/23/18 10:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-2

Matrix: Solid
Percent Solids: 72.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**0.34**	**J B**	2.6	0.24	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Acenaphthene	ND		2.6	0.32	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Acenaphthylene	ND		2.6	0.26	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Anthracene	ND		2.6	0.32	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Benzo[a]anthracene	**0.96**	**J B**	2.6	0.40	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Benzo[a]pyrene	ND		2.6	0.21	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Benzo[b]fluoranthene	ND		2.6	0.31	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Benzo[g,h,i]perylene	ND		2.6	0.26	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Benzo[k]fluoranthene	ND		2.6	0.32	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Chrysene	ND		2.6	0.79	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Dibenz(a,h)anthracene	ND		2.6	0.38	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Fluoranthene	ND		2.6	0.74	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Fluorene	ND		2.6	0.26	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Indeno[1,2,3-cd]pyrene	ND	*	2.6	0.32	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Naphthalene	ND		2.6	0.42	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Phenanthrene	**0.63**	**J B**	2.6	0.36	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2
Pyrene	**0.57**	**J B**	2.6	0.51	ug/Kg	☼	07/27/18 09:37	07/29/18 00:04	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*82*		*57 - 120*	*07/27/18 09:37*	*07/29/18 00:04*	*2*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.6	0.45	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1
PCB-1221	ND		2.6	1.3	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1
PCB-1232	ND		2.6	0.62	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1
PCB-1242	ND		2.6	0.65	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1
PCB-1248	ND		2.6	0.21	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1
PCB-1254	ND		2.6	1.0	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1
PCB-1260	ND		2.6	0.45	ug/Kg	☼	07/28/18 09:59	08/13/18 19:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*		*54 - 142*	*07/28/18 09:59*	*08/13/18 19:18*	*1*
Tetrachloro-m-xylene	*66*		*58 - 122*	*07/28/18 09:59*	*08/13/18 19:18*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**780**	**J**	2000	44	mg/Kg			07/31/18 11:20	1
Total Solids	**72.6**		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	**72**	**H**	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**2.0**				%			07/27/18 09:40	1
Coarse Sand	**0.2**				%			07/27/18 09:40	1
Medium Sand	**0.3**				%			07/27/18 09:40	1
Fine Sand	**17.4**				%			07/27/18 09:40	1
Silt	**68.8**				%			07/27/18 09:40	1
Clay	**11.4**				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S045-4to6

Date Collected: 07/23/18 10:05
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-3

Matrix: Solid
Percent Solids: 73.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	**0.43**	**J B**	1.3	0.12	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Acenaphthene	ND		1.3	0.16	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Acenaphthylene	ND		1.3	0.13	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Anthracene	ND		1.3	0.16	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Benzo[a]anthracene	**0.61**	**J B**	1.3	0.20	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Benzo[a]pyrene	ND		1.3	0.11	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Benzo[b]fluoranthene	ND		1.3	0.16	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Benzo[g,h,i]perylene	**0.47**	**J**	1.3	0.13	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Benzo[k]fluoranthene	ND		1.3	0.16	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Chrysene	ND		1.3	0.40	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Dibenz(a,h)anthracene	ND		1.3	0.19	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Fluoranthene	ND		1.3	0.37	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Fluorene	**0.14**	**J B**	1.3	0.13	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Indeno[1,2,3-cd]pyrene	ND	*	1.3	0.16	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Naphthalene	**0.41**	**J B**	1.3	0.21	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Phenanthrene	**0.41**	**J B**	1.3	0.18	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1
Pyrene	**0.28**	**J B**	1.3	0.26	ug/Kg	☼	07/27/18 09:37	07/29/18 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*57 - 120*	*07/27/18 09:37*	*07/29/18 00:27*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.7	0.46	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1
PCB-1221	ND		2.7	1.3	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1
PCB-1232	ND		2.7	0.63	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1
PCB-1242	ND		2.7	0.66	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1
PCB-1248	ND		2.7	0.21	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1
PCB-1254	ND		2.7	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1
PCB-1260	ND		2.7	0.46	ug/Kg	☼	07/28/18 09:59	08/13/18 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*78*		*54 - 142*	*07/28/18 09:59*	*08/13/18 19:35*	*1*
Tetrachloro-m-xylene	*67*		*58 - 122*	*07/28/18 09:59*	*08/13/18 19:35*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**440**	**J**	2000	44	mg/Kg			07/31/18 11:25	1
Total Solids	**73.1**		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	**73**	**H**	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**0.0**				%			07/27/18 09:40	1
Coarse Sand	**0.0**				%			07/27/18 09:40	1
Medium Sand	**0.1**				%			07/27/18 09:40	1
Fine Sand	**16.5**				%			07/27/18 09:40	1
Silt	**71.3**				%			07/27/18 09:40	1
Clay	**12.1**				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S042-0to2

Date Collected: 07/23/18 11:25
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-4

Matrix: Solid
Percent Solids: 54.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	40	B	34	3.1	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Acenaphthene	46	B	34	4.1	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Acenaphthylene	17	J B	34	3.4	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Anthracene	56	B	34	4.1	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Benzo[a]anthracene	160	B	34	5.2	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Benzo[a]pyrene	200	B	34	2.7	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Benzo[b]fluoranthene	280		34	4.0	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Benzo[g,h,i]perylene	180		34	3.4	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Benzo[k]fluoranthene	90	B	34	4.1	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Chrysene	230		34	10	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Dibenz(a,h)anthracene	34		34	4.9	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Fluoranthene	300		34	9.6	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Fluorene	34	B	34	3.4	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Indeno[1,2,3-cd]pyrene	180	*	34	4.1	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Naphthalene	130	B	34	5.5	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Phenanthrene	240	B	34	4.7	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10
Pyrene	320	B	34	6.6	ug/Kg	☼	07/27/18 09:37	07/29/18 00:48	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*78*		*57 - 120*	*07/27/18 09:37*	*07/29/18 00:48*	*10*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		7.1	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1
PCB-1221	ND		7.1	3.4	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1
PCB-1232	ND		7.1	1.7	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1
PCB-1242	ND		7.1	1.7	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1
PCB-1248	ND		7.1	0.57	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1
PCB-1254	48		7.1	2.8	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1
PCB-1260	ND		7.1	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*54 - 142*	*07/28/18 09:59*	*08/13/18 19:53*	*1*
Tetrachloro-m-xylene	*61*		*58 - 122*	*07/28/18 09:59*	*08/13/18 19:53*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	21000		2000	44	mg/Kg			07/31/18 11:30	1
Total Solids	54.1		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	55	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 09:40	1
Coarse Sand	0.3				%			07/27/18 09:40	1
Medium Sand	2.9				%			07/27/18 09:40	1
Fine Sand	29.2				%			07/27/18 09:40	1
Silt	57.0				%			07/27/18 09:40	1
Clay	10.7				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S042-2to4

Date Collected: 07/23/18 11:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-5

Matrix: Solid
Percent Solids: 64.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	320	B	30	2.7	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Acenaphthene	300	B	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Acenaphthylene	51	B	30	3.0	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Anthracene	170	B	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Benzo[a]anthracene	430	B	30	4.5	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Benzo[a]pyrene	490	B	30	2.4	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Benzo[b]fluoranthene	540		30	3.5	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Benzo[g,h,i]perylene	420		30	3.0	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Benzo[k]fluoranthene	190	B	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Chrysene	660		30	8.9	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Dibenz(a,h)anthracene	73		30	4.3	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Fluoranthene	1100		30	8.3	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Fluorene	140	B	30	3.0	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Indeno[1,2,3-cd]pyrene	440	*	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Naphthalene	860	B	30	4.8	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Phenanthrene	970	B	30	4.1	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10
Pyrene	1400	B	30	5.8	ug/Kg	☼	07/27/18 09:37	07/29/18 01:11	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*57 - 120*	*07/27/18 09:37*	*07/29/18 01:11*	*10*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		5.7	0.98	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1
PCB-1221	ND		5.7	2.7	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1
PCB-1232	ND		5.7	1.3	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1
PCB-1242	ND		5.7	1.4	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1
PCB-1248	ND		5.7	0.46	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1
PCB-1254	27		5.7	2.3	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1
PCB-1260	ND		5.7	0.98	ug/Kg	☼	07/28/18 09:59	08/13/18 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*87*		*54 - 142*	*07/28/18 09:59*	*08/13/18 20:11*	*1*
Tetrachloro-m-xylene	*70*		*58 - 122*	*07/28/18 09:59*	*08/13/18 20:11*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	12000		2000	44	mg/Kg			07/31/18 11:36	1
Total Solids	64.6		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	65	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 09:40	1
Coarse Sand	1.0				%			07/27/18 09:40	1
Medium Sand	5.3				%			07/27/18 09:40	1
Fine Sand	48.0				%			07/27/18 09:40	1
Silt	38.7				%			07/27/18 09:40	1
Clay	7.0				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S042-4to6

Date Collected: 07/23/18 11:35
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-6

Matrix: Solid
Percent Solids: 63.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	180	B	30	2.7	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Acenaphthene	180	B	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Acenaphthylene	52	B	30	3.0	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Anthracene	210	B	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Benzo[a]anthracene	420	B	30	4.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Benzo[a]pyrene	610	B	30	2.4	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Benzo[b]fluoranthene	620		30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Benzo[g,h,i]perylene	580		30	3.0	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Benzo[k]fluoranthene	240	B	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Chrysene	630		30	9.1	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Dibenz(a,h)anthracene	94		30	4.4	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Fluoranthene	1000		30	8.5	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Fluorene	170	B	30	3.0	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Indeno[1,2,3-cd]pyrene	580	*	30	3.6	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Naphthalene	420	B	30	4.8	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Phenanthrene	860	B	30	4.2	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10
Pyrene	1200	B	30	5.9	ug/Kg	☼	07/27/18 09:37	07/29/18 01:33	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*74*		*57 - 120*	*07/27/18 09:37*	*07/29/18 01:33*	*10*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		5.9	1.0	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1
PCB-1221	ND		5.9	2.8	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1
PCB-1232	ND		5.9	1.4	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1
PCB-1242	ND		5.9	1.4	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1
PCB-1248	ND		5.9	0.47	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1
PCB-1254	16		5.9	2.3	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1
PCB-1260	ND		5.9	1.0	ug/Kg	☼	07/28/18 09:59	08/13/18 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*51*	*X*	*54 - 142*	*07/28/18 09:59*	*08/13/18 20:28*	*1*
Tetrachloro-m-xylene	*55*	*X*	*58 - 122*	*07/28/18 09:59*	*08/13/18 20:28*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	15000		2000	44	mg/Kg			07/31/18 11:41	1
Total Solids	63.4		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	67	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	5.7				%			07/27/18 09:40	1
Coarse Sand	0.2				%			07/27/18 09:40	1
Medium Sand	4.3				%			07/27/18 09:40	1
Fine Sand	41.5				%			07/27/18 09:40	1
Silt	35.5				%			07/27/18 09:40	1
Clay	12.7				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S061-0to3

Date Collected: 07/23/18 13:40
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-7

Matrix: Solid
Percent Solids: 81.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	49	B	5.9	0.53	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Acenaphthene	31		5.9	0.70	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Acenaphthylene	45		5.9	0.59	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Anthracene	98		5.9	0.70	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Benzo[a]pyrene	630	F2 F1	5.9	0.47	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Benzo[b]fluoranthene	770	F2 F1	5.9	0.69	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Benzo[g,h,i]perylene	550		5.9	0.59	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Benzo[k]fluoranthene	210		5.9	0.70	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Chrysene	560	F2 F1	5.9	1.8	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Dibenz(a,h)anthracene	81		5.9	0.84	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Fluoranthene	960		5.9	1.6	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Fluorene	42		5.9	0.59	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Indeno[1,2,3-cd]pyrene	560	F1	5.9	0.70	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Naphthalene	88	B	5.9	0.94	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Phenanthrene	300	B	5.9	0.81	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5
Pyrene	1400		5.9	1.1	ug/Kg	☼	07/27/18 13:53	07/29/18 17:50	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*94*		*57 - 120*	*07/27/18 13:53*	*07/29/18 17:50*	*5*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	540	F1	5.9	0.89	ug/Kg	☼	07/27/18 13:53	08/06/18 12:26	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.4	0.41	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1
PCB-1221	ND		2.4	1.2	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1
PCB-1232	ND		2.4	0.57	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1
PCB-1242	ND		2.4	0.59	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1
PCB-1248	ND		2.4	0.19	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1
PCB-1254	ND		2.4	0.96	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1
PCB-1260	ND		2.4	0.41	ug/Kg	☼	07/27/18 10:51	08/01/18 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*54 - 142*	*07/27/18 10:51*	*08/01/18 00:13*	*1*
Tetrachloro-m-xylene	*63*		*58 - 122*	*07/27/18 10:51*	*08/01/18 00:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	2300		2000	44	mg/Kg			08/02/18 16:33	1
Total Solids	81.4		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	82	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	5.7				%			07/27/18 09:40	1
Coarse Sand	2.5				%			07/27/18 09:40	1
Medium Sand	43.9				%			07/27/18 09:40	1
Fine Sand	44.3				%			07/27/18 09:40	1
Silt	2.8				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S061-0to3
Date Collected: 07/23/18 13:40
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-7
Matrix: Solid
Percent Solids: 81.4

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	0.8				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S061-3to4.5

Date Collected: 07/23/18 13:45
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-8

Matrix: Solid
Percent Solids: 61.3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	490	B	160	14	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Acenaphthene	3600		160	19	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Acenaphthylene	160		160	16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Anthracene	3400		160	19	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Benzo[a]pyrene	23000		160	13	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Benzo[b]fluoranthene	32000		160	19	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Benzo[g,h,i]perylene	17000		160	16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Benzo[k]fluoranthene	8700		160	19	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Chrysene	19000		160	48	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Dibenz(a,h)anthracene	3500		160	23	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Fluoranthene	28000		160	45	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Fluorene	2100		160	16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Indeno[1,2,3-cd]pyrene	19000		160	19	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Naphthalene	1100	B	160	25	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Phenanthrene	14000	B	160	22	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50
Pyrene	27000		160	31	ug/Kg	☼	07/27/18 13:53	07/29/18 19:09	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*57 - 120*	*07/27/18 13:53*	*07/29/18 19:09*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	19000		160	24	ug/Kg	☼	07/27/18 13:53	08/06/18 13:43	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.2	0.54	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1
PCB-1221	ND		3.2	1.5	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1
PCB-1232	ND		3.2	0.75	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1
PCB-1242	ND		3.2	0.78	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1
PCB-1248	ND		3.2	0.26	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1
PCB-1254	ND		3.2	1.3	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1
PCB-1260	6.5		3.2	0.54	ug/Kg	☼	07/27/18 10:51	08/01/18 00:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*66*		*54 - 142*	*07/27/18 10:51*	*08/01/18 00:31*	*1*
Tetrachloro-m-xylene	*54*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 00:31*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	27000		2000	44	mg/Kg			08/02/18 16:44	1
Total Solids	61.3		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	61	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	1.0				%			07/27/18 09:40	1
Coarse Sand	1.3				%			07/27/18 09:40	1
Medium Sand	12.4				%			07/27/18 09:40	1
Fine Sand	41.6				%			07/27/18 09:40	1
Silt	35.7				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S061-3to4.5
Date Collected: 07/23/18 13:45
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-8
Matrix: Solid
Percent Solids: 61.3

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	8.0				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S061-4.5to6

Date Collected: 07/23/18 13:50
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-9

Matrix: Solid
Percent Solids: 70.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	16	B	1.4	0.12	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Acenaphthene	92		1.4	0.16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Acenaphthylene	11		1.4	0.14	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Anthracene	76		1.4	0.16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Benzo[a]pyrene	430		1.4	0.11	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Benzo[b]fluoranthene	590		1.4	0.16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Benzo[g,h,i]perylene	340		1.4	0.14	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Benzo[k]fluoranthene	170		1.4	0.16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Chrysene	400		1.4	0.41	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Dibenz(a,h)anthracene	81		1.4	0.20	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Fluoranthene	790		1.4	0.38	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Fluorene	42		1.4	0.14	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Indeno[1,2,3-cd]pyrene	400		1.4	0.16	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Naphthalene	33	B	1.4	0.22	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Phenanthrene	360	B	1.4	0.19	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1
Pyrene	770		1.4	0.27	ug/Kg	☼	07/27/18 13:53	07/29/18 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*89*		*57 - 120*	*07/27/18 13:53*	*07/29/18 19:35*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	380		1.4	0.21	ug/Kg	☼	07/27/18 13:53	08/06/18 14:09	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.8	0.48	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1
PCB-1232	ND		2.8	0.66	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1
PCB-1242	ND		2.8	0.69	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1
PCB-1248	ND		2.8	0.23	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1
PCB-1254	ND		2.8	1.1	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1
PCB-1260	ND		2.8	0.48	ug/Kg	☼	07/27/18 10:51	08/01/18 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*58*		*54 - 142*	*07/27/18 10:51*	*08/01/18 00:49*	*1*
Tetrachloro-m-xylene	*33*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 00:49*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	7800		2000	44	mg/Kg			08/03/18 14:44	1
Total Solids	70.4		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	70	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 09:40	1
Coarse Sand	0.1				%			07/27/18 09:40	1
Medium Sand	0.8				%			07/27/18 09:40	1
Fine Sand	33.2				%			07/27/18 09:40	1
Silt	58.8				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S061-4.5to6
Date Collected: 07/23/18 13:50
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-9
Matrix: Solid
Percent Solids: 70.4

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.1				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S066-0to2

Date Collected: 07/23/18 15:20
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-10

Matrix: Solid
Percent Solids: 75.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	11	B	1.3	0.11	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Acenaphthene	13		1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Acenaphthylene	6.8		1.3	0.13	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Anthracene	19		1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Benzo[a]pyrene	54		1.3	0.10	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Benzo[b]fluoranthene	62		1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Benzo[g,h,i]perylene	55		1.3	0.13	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Benzo[k]fluoranthene	15		1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Chrysene	50		1.3	0.38	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Dibenz(a,h)anthracene	5.4		1.3	0.18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Fluoranthene	110		1.3	0.36	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Fluorene	15		1.3	0.13	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Indeno[1,2,3-cd]pyrene	55		1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Naphthalene	40	B	1.3	0.20	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Phenanthrene	87	B	1.3	0.18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1
Pyrene	130		1.3	0.25	ug/Kg	☼	07/27/18 13:53	07/29/18 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*91*		*57 - 120*	*07/27/18 13:53*	*07/29/18 20:01*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	49		1.3	0.19	ug/Kg	☼	07/27/18 13:53	08/06/18 14:35	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.5	0.43	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1
PCB-1221	ND		2.5	1.2	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1
PCB-1232	ND		2.5	0.60	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1
PCB-1242	ND		2.5	0.62	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1
PCB-1248	ND		2.5	0.20	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1
PCB-1254	ND		2.5	1.0	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1
PCB-1260	1.0	J	2.5	0.43	ug/Kg	☼	07/27/18 10:51	08/01/18 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*56*		*54 - 142*	*07/27/18 10:51*	*08/01/18 01:06*	*1*
Tetrachloro-m-xylene	*54*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 01:06*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	5600		2000	44	mg/Kg			08/03/18 14:49	1
Total Solids	75.2		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	74	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.8				%			07/27/18 09:40	1
Coarse Sand	4.1				%			07/27/18 09:40	1
Medium Sand	29.3				%			07/27/18 09:40	1
Fine Sand	45.3				%			07/27/18 09:40	1
Silt	15.9				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S066-0to2
Date Collected: 07/23/18 15:20
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-10
Matrix: Solid
Percent Solids: 75.2

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	4.5				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S066-2to4

Date Collected: 07/23/18 15:25
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-11

Matrix: Solid
Percent Solids: 62.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	780	B	150	14	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Acenaphthene	1500		150	18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Acenaphthylene	610		150	15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Anthracene	1600		150	18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Benzo[a]pyrene	1800		150	12	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Benzo[b]fluoranthene	1800		150	18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Benzo[g,h,i]perylene	1800		150	15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Benzo[k]fluoranthene	520		150	18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Chrysene	1900		150	46	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Dibenz(a,h)anthracene	160		150	22	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Fluoranthene	6800		150	43	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Fluorene	1400		150	15	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Indeno[1,2,3-cd]pyrene	1500		150	18	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Naphthalene	2400	B	150	25	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Phenanthrene	7500	B	150	21	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50
Pyrene	8200		150	30	ug/Kg	☼	07/27/18 13:53	07/29/18 20:27	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*85*		*57 - 120*	*07/27/18 13:53*	*07/29/18 20:27*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	1500		150	23	ug/Kg	☼	07/27/18 13:53	08/06/18 15:01	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		6.2	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1
PCB-1221	ND		6.2	3.0	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1
PCB-1232	ND		6.2	1.5	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1
PCB-1242	ND		6.2	1.5	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1
PCB-1248	ND		6.2	0.50	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1
PCB-1254	ND		6.2	2.5	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1
PCB-1260	2.3	J	6.2	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*84*		*54 - 142*	*07/28/18 09:59*	*08/13/18 20:46*	*1*
Tetrachloro-m-xylene	*63*		*58 - 122*	*07/28/18 09:59*	*08/13/18 20:46*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	30000		2000	44	mg/Kg			07/31/18 11:46	1
Total Solids	62.9		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	61	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.1				%			07/27/18 09:40	1
Coarse Sand	0.2				%			07/27/18 09:40	1
Medium Sand	2.7				%			07/27/18 09:40	1
Fine Sand	38.3				%			07/27/18 09:40	1
Silt	49.8				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S066-2to4
Date Collected: 07/23/18 15:25
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-11
Matrix: Solid
Percent Solids: 62.9

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	8.9				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S066-4to5.8

Date Collected: 07/23/18 15:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-12

Matrix: Solid
Percent Solids: 72.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	240	B	13	1.2	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Acenaphthene	500		13	1.5	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Acenaphthylene	210		13	1.3	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Anthracene	650		13	1.5	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Benzo[a]pyrene	1500		13	1.0	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Benzo[b]fluoranthene	1500		13	1.5	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Benzo[g,h,i]perylene	1400		13	1.3	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Benzo[k]fluoranthene	410		13	1.5	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Chrysene	1400		13	3.9	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Dibenz(a,h)anthracene	140		13	1.9	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Fluoranthene	3900		13	3.6	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Fluorene	350		13	1.3	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Indeno[1,2,3-cd]pyrene	1200		13	1.5	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Naphthalene	950	B	13	2.1	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Phenanthrene	3000	B	13	1.8	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10
Pyrene	5000		13	2.5	ug/Kg	☼	07/27/18 13:53	07/29/18 20:53	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*57 - 120*	*07/27/18 13:53*	*07/29/18 20:53*	*10*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	1200		13	2.0	ug/Kg	☼	07/27/18 13:53	08/06/18 15:27	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.7	0.46	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1
PCB-1221	ND		2.7	1.3	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1
PCB-1232	ND		2.7	0.63	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1
PCB-1242	ND		2.7	0.66	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1
PCB-1248	ND		2.7	0.22	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1
PCB-1254	ND		2.7	1.1	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1
PCB-1260	ND		2.7	0.46	ug/Kg	☼	07/27/18 10:51	08/01/18 01:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*52*	*X*	*54 - 142*	*07/27/18 10:51*	*08/01/18 01:24*	*1*
Tetrachloro-m-xylene	*53*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 01:24*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	11000		2000	44	mg/Kg			07/31/18 11:52	1
Total Solids	72.6		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	72	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	4.4				%			07/27/18 09:40	1
Coarse Sand	2.1				%			07/27/18 09:40	1
Medium Sand	15.8				%			07/27/18 09:40	1
Fine Sand	46.5				%			07/27/18 09:40	1
Silt	25.1				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S066-4to5.8
Date Collected: 07/23/18 15:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-12
Matrix: Solid
Percent Solids: 72.6

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	6.1				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S066-5.8to6.6

Date Collected: 07/23/18 15:35
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-13

Matrix: Solid
Percent Solids: 69.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	150	B	6.8	0.61	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Acenaphthene	320		6.8	0.82	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Acenaphthylene	200		6.8	0.68	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Anthracene	560		6.8	0.82	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Benzo[a]pyrene	1400		6.8	0.55	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Benzo[b]fluoranthene	1400		6.8	0.81	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Benzo[g,h,i]perylene	1300		6.8	0.68	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Benzo[k]fluoranthene	390		6.8	0.82	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Chrysene	1300		6.8	2.0	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Dibenz(a,h)anthracene	100		6.8	0.98	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Fluoranthene	3900		6.8	1.9	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Fluorene	290		6.8	0.68	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Indeno[1,2,3-cd]pyrene	1100		6.8	0.82	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Naphthalene	660	B	6.8	1.1	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Phenanthrene	2700	B	6.8	0.94	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5
Pyrene	5000		6.8	1.3	ug/Kg	☼	07/27/18 13:53	07/29/18 21:19	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*99*		*57 - 120*	*07/27/18 13:53*	*07/29/18 21:19*	*5*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	980		6.8	1.0	ug/Kg	☼	07/27/18 13:53	08/06/18 15:53	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.8	0.48	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1
PCB-1232	ND		2.8	0.67	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1
PCB-1242	ND		2.8	0.70	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1
PCB-1248	ND		2.8	0.23	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1
PCB-1254	ND		2.8	1.1	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1
PCB-1260	ND		2.8	0.48	ug/Kg	☼	07/27/18 10:51	08/01/18 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*54*		*54 - 142*	*07/27/18 10:51*	*08/01/18 01:42*	*1*
Tetrachloro-m-xylene	*54*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 01:42*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	18000		2000	44	mg/Kg			08/03/18 14:54	1
Total Solids	69.5		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	68	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 09:40	1
Coarse Sand	0.3				%			07/27/18 09:40	1
Medium Sand	2.7				%			07/27/18 09:40	1
Fine Sand	34.4				%			07/27/18 09:40	1
Silt	54.8				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S066-5.8to6.6
Date Collected: 07/23/18 15:35
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-13
Matrix: Solid
Percent Solids: 69.5

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.8				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S082-0to2

Date Collected: 07/24/18 10:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-14

Matrix: Solid
Percent Solids: 51.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	430	B	180	16	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Acenaphthene	490		180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Acenaphthylene	240		180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Anthracene	540		180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Benzo[a]pyrene	1600		180	15	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Benzo[b]fluoranthene	2300		180	21	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Benzo[g,h,i]perylene	1400		180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Benzo[k]fluoranthene	680		180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Chrysene	1900		180	55	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Dibenz(a,h)anthracene	250		180	26	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Fluoranthene	3400		180	51	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Fluorene	480		180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Indeno[1,2,3-cd]pyrene	1600		180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Naphthalene	1500	B	180	29	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Phenanthrene	2200	B	180	25	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50
Pyrene	3600		180	35	ug/Kg	☼	07/27/18 13:53	07/29/18 21:45	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*87*		*57 - 120*	*07/27/18 13:53*	*07/29/18 21:45*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	1600		180	28	ug/Kg	☼	07/27/18 13:53	08/06/18 16:19	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.8	0.64	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1
PCB-1221	ND		3.8	1.8	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1
PCB-1232	ND		3.8	0.89	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1
PCB-1242	ND		3.8	0.92	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1
PCB-1248	ND		3.8	0.30	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1
PCB-1254	45		3.8	1.5	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1
PCB-1260	ND		3.8	0.64	ug/Kg	☼	07/27/18 10:51	08/01/18 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*224*	*X*	*54 - 142*	*07/27/18 10:51*	*08/01/18 01:59*	*1*
Tetrachloro-m-xylene	*50*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 01:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	29000		2000	44	mg/Kg			08/03/18 15:00	1
Total Solids	51.6		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	53	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.1				%			07/27/18 09:40	1
Coarse Sand	0.1				%			07/27/18 09:40	1
Medium Sand	1.0				%			07/27/18 09:40	1
Fine Sand	45.1				%			07/27/18 09:40	1
Silt	45.8				%			07/27/18 09:40	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S082-0to2
Date Collected: 07/24/18 10:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-14
Matrix: Solid
Percent Solids: 51.6

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	8.0				%			07/27/18 09:40	1

Client Sample ID: PDI-SC-S082-2to4

Date Collected: 07/24/18 10:05
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-15

Matrix: Solid
Percent Solids: 60.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	230	B	81	7.3	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Acenaphthene	340		81	9.7	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Acenaphthylene	190		81	8.1	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Anthracene	490		81	9.7	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Benzo[a]pyrene	1200		81	6.5	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Benzo[b]fluoranthene	1300		81	9.5	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Benzo[g,h,i]perylene	1400		81	8.1	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Benzo[k]fluoranthene	350		81	9.7	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Chrysene	1300		81	24	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Dibenz(a,h)anthracene	95		81	12	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Fluoranthene	3700		81	23	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Fluorene	280		81	8.1	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Indeno[1,2,3-cd]pyrene	1200		81	9.7	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Naphthalene	660	B	81	13	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Phenanthrene	2600	B	81	11	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25
Pyrene	4900		81	16	ug/Kg	☼	07/27/18 13:53	07/29/18 22:11	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*82*		*57 - 120*	*07/27/18 13:53*	*07/29/18 22:11*	*25*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	960		81	12	ug/Kg	☼	07/27/18 13:53	08/06/18 16:45	25

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.3	0.56	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1
PCB-1221	ND		3.3	1.6	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1
PCB-1232	ND		3.3	0.77	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1
PCB-1242	ND		3.3	0.81	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1
PCB-1248	ND		3.3	0.26	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1
PCB-1254	23		3.3	1.3	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1
PCB-1260	ND		3.3	0.56	ug/Kg	☼	07/27/18 10:51	07/28/18 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*128*		*54 - 142*	*07/27/18 10:51*	*07/28/18 00:38*	*1*
Tetrachloro-m-xylene	*66*		*58 - 122*	*07/27/18 10:51*	*07/28/18 00:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	19000		2000	44	mg/Kg			07/31/18 11:57	1
Total Solids	60.5		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	59	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.1				%			07/27/18 14:22	1
Coarse Sand	0.3				%			07/27/18 14:22	1
Medium Sand	2.1				%			07/27/18 14:22	1
Fine Sand	34.3				%			07/27/18 14:22	1
Silt	55.3				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S082-2to4
Date Collected: 07/24/18 10:05
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-15
Matrix: Solid
Percent Solids: 60.5

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.9				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S082-4to6

Date Collected: 07/24/18 10:10
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-16

Matrix: Solid
Percent Solids: 66.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	9.6	J B	15	1.3	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Acenaphthene	95	B	15	1.8	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Acenaphthylene	6.9	J B	15	1.5	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Anthracene	26	B	15	1.8	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Benzo[a]anthracene	70		15	2.2	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Benzo[a]pyrene	49		15	1.2	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Benzo[b]fluoranthene	70		15	1.7	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Benzo[g,h,i]perylene	40		15	1.5	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Benzo[k]fluoranthene	25		15	1.8	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Chrysene	77		15	4.4	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Dibenz(a,h)anthracene	8.3	J	15	2.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Fluoranthene	220	B	15	4.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Fluorene	39	B	15	1.5	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Indeno[1,2,3-cd]pyrene	49		15	1.8	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Naphthalene	23	B	15	2.4	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Phenanthrene	260	B	15	2.0	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10
Pyrene	190	B	15	2.9	ug/Kg	☼	07/29/18 10:35	08/02/18 18:01	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*57 - 120*	*07/29/18 10:35*	*08/02/18 18:01*	*10*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.9	0.50	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1
PCB-1232	ND		2.9	0.69	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1
PCB-1242	ND		2.9	0.72	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1
PCB-1254	1.4	J	2.9	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1
PCB-1260	ND		2.9	0.50	ug/Kg	☼	07/28/18 09:59	08/13/18 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*54 - 142*	*07/28/18 09:59*	*08/13/18 21:04*	*1*
Tetrachloro-m-xylene	*58*		*58 - 122*	*07/28/18 09:59*	*08/13/18 21:04*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	11000		2000	44	mg/Kg			07/31/18 12:09	1
Total Solids	66.8		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	68	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 14:22	1
Coarse Sand	0.0				%			07/27/18 14:22	1
Medium Sand	0.4				%			07/27/18 14:22	1
Fine Sand	24.5				%			07/27/18 14:22	1
Silt	64.6				%			07/27/18 14:22	1
Clay	10.4				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S095-0to2
Date Collected: 07/24/18 12:15
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-17
Matrix: Solid
Percent Solids: 54.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2200	B	180	16	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Acenaphthene	21000		180	21	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Acenaphthylene	1400		180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Anthracene	22000		180	21	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Benzo[a]pyrene	31000		180	14	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Benzo[b]fluoranthene	31000		180	21	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Benzo[g,h,i]perylene	25000		180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Benzo[k]fluoranthene	10000		180	21	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Chrysene	30000		180	54	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Dibenz(a,h)anthracene	2600		180	26	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Fluoranthene	93000		180	50	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Fluorene	16000		180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Indeno[1,2,3-cd]pyrene	25000		180	21	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Naphthalene	5600	B	180	29	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Phenanthrene	120000	B	180	25	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50
Pyrene	120000		180	35	ug/Kg	☼	07/27/18 13:53	07/29/18 22:37	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*86*		*57 - 120*	*07/27/18 13:53*	*07/29/18 22:37*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	25000		180	27	ug/Kg	☼	07/27/18 13:53	08/06/18 17:11	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.6	0.61	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1
PCB-1221	ND		3.6	1.7	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1
PCB-1232	ND		3.6	0.84	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1
PCB-1242	ND		3.6	0.87	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1
PCB-1248	ND		3.6	0.29	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1
PCB-1254	ND		3.6	1.4	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1
PCB-1260	36		3.6	0.61	ug/Kg	☼	07/27/18 10:51	08/01/18 02:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*54 - 142*	*07/27/18 10:51*	*08/01/18 02:17*	*1*
Tetrachloro-m-xylene	*67*		*58 - 122*	*07/27/18 10:51*	*08/01/18 02:17*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	59000		2000	44	mg/Kg			07/31/18 12:14	1
Total Solids	54.8		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	57	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 14:22	1
Coarse Sand	0.1				%			07/27/18 14:22	1
Medium Sand	0.6				%			07/27/18 14:22	1
Fine Sand	22.4				%			07/27/18 14:22	1
Silt	64.0				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S095-0to2
Date Collected: 07/24/18 12:15
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-17
Matrix: Solid
Percent Solids: 54.8

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	12.8				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S095-2to4

Date Collected: 07/24/18 12:20
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-18

Matrix: Solid
Percent Solids: 58.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2700	B	80	7.2	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Acenaphthene	14000	B	80	9.6	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Acenaphthylene	1300	B	80	8.0	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Anthracene	13000	B	80	9.6	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Benzo[a]anthracene	23000		80	12	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Benzo[a]pyrene	24000		80	6.4	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Benzo[b]fluoranthene	22000		80	9.5	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Benzo[g,h,i]perylene	27000		80	8.0	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Benzo[k]fluoranthene	8200		80	9.6	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Chrysene	23000		80	24	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Dibenz(a,h)anthracene	1900		80	12	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Fluoranthene	73000	B	80	22	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Fluorene	12000	B	80	8.0	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Indeno[1,2,3-cd]pyrene	23000		80	9.6	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50
Naphthalene	8200	B	80	13	ug/Kg	☼	07/29/18 10:35	08/02/18 18:27	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*94*		*57 - 120*	*07/29/18 10:35*	*08/02/18 18:27*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	93000	B	1600	220	ug/Kg	☼	07/29/18 10:35	08/07/18 13:09	1000
Pyrene	100000	B	1600	310	ug/Kg	☼	07/29/18 10:35	08/07/18 13:09	1000

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		6.7	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1
PCB-1221	ND		6.7	3.2	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1
PCB-1232	ND		6.7	1.6	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1
PCB-1242	ND		6.7	1.7	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1
PCB-1248	ND		6.7	0.54	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1
PCB-1254	ND		6.7	2.7	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1
PCB-1260	12		6.7	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*108*		*54 - 142*	*07/28/18 09:59*	*08/13/18 21:22*	*1*
Tetrachloro-m-xylene	*69*		*58 - 122*	*07/28/18 09:59*	*08/13/18 21:22*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	51000		2000	44	mg/Kg			07/31/18 12:20	1
Total Solids	58.2		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	57	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 14:22	1
Coarse Sand	0.2				%			07/27/18 14:22	1
Medium Sand	0.6				%			07/27/18 14:22	1
Fine Sand	33.3				%			07/27/18 14:22	1
Silt	53.2				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S095-2to4
Date Collected: 07/24/18 12:20
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-18
Matrix: Solid
Percent Solids: 58.2

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	12.6				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S095-4to6

Date Collected: 07/24/18 12:25
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-19

Matrix: Solid
Percent Solids: 60.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	620	B	160	15	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Acenaphthene	5400		160	20	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Acenaphthylene	910		160	16	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Anthracene	5800		160	20	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Benzo[a]pyrene	16000		160	13	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Benzo[b]fluoranthene	16000		160	19	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Benzo[g,h,i]perylene	16000		160	16	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Benzo[k]fluoranthene	4100		160	20	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Chrysene	13000		160	49	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Dibenz(a,h)anthracene	1300		160	24	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Fluoranthene	41000		160	46	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Fluorene	3800		160	16	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Indeno[1,2,3-cd]pyrene	14000		160	20	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Naphthalene	3900	B	160	26	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Phenanthrene	37000	B	160	23	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50
Pyrene	52000		160	32	ug/Kg	☼	07/27/18 13:53	07/29/18 23:03	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*86*		*57 - 120*	*07/27/18 13:53*	*07/29/18 23:03*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	11000		160	25	ug/Kg	☼	07/27/18 13:53	08/06/18 17:37	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.3	0.56	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1
PCB-1221	ND		3.3	1.6	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1
PCB-1232	ND		3.3	0.78	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1
PCB-1242	ND		3.3	0.81	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1
PCB-1248	ND		3.3	0.26	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1
PCB-1254	ND		3.3	1.3	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1
PCB-1260	ND		3.3	0.56	ug/Kg	☼	07/27/18 10:51	08/01/18 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*63*		*54 - 142*	*07/27/18 10:51*	*08/01/18 02:34*	*1*
Tetrachloro-m-xylene	*61*		*58 - 122*	*07/27/18 10:51*	*08/01/18 02:34*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	34000		2000	44	mg/Kg			07/31/18 12:26	1
Total Solids	60.2		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	63	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.3				%			07/27/18 14:22	1
Coarse Sand	0.1				%			07/27/18 14:22	1
Medium Sand	0.6				%			07/27/18 14:22	1
Fine Sand	39.9				%			07/27/18 14:22	1
Silt	51.6				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S095-4to6
Date Collected: 07/24/18 12:25
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-19
Matrix: Solid
Percent Solids: 60.2

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	7.6				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S064-0to2

Date Collected: 07/24/18 16:40
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-20

Matrix: Solid
Percent Solids: 55.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	530	B	17	1.6	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Acenaphthene	1600		17	2.1	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Acenaphthylene	260		17	1.7	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Anthracene	560		17	2.1	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Benzo[a]pyrene	1700		17	1.4	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Benzo[b]fluoranthene	1900		17	2.0	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Benzo[g,h,i]perylene	1600		17	1.7	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Benzo[k]fluoranthene	460		17	2.1	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Chrysene	1900		17	5.2	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Dibenz(a,h)anthracene	180		17	2.5	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Fluoranthene	5000		17	4.9	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Fluorene	1000		17	1.7	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Indeno[1,2,3-cd]pyrene	1500		17	2.1	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Naphthalene	1300	B	17	2.8	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Phenanthrene	7300	B	17	2.4	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10
Pyrene	6400		17	3.4	ug/Kg	☼	07/27/18 13:53	07/29/18 23:29	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*83*		*57 - 120*	*07/27/18 13:53*	*07/29/18 23:29*	*10*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	1700		17	2.6	ug/Kg	☼	07/27/18 13:53	08/06/18 18:03	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.6	0.61	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1
PCB-1221	ND		3.6	1.7	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1
PCB-1232	ND		3.6	0.84	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1
PCB-1242	ND		3.6	0.88	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1
PCB-1248	ND		3.6	0.29	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1
PCB-1254	ND		3.6	1.4	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1
PCB-1260	9.5		3.6	0.61	ug/Kg	☼	07/27/18 10:51	08/01/18 02:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*54 - 142*	*07/27/18 10:51*	*08/01/18 02:52*	*1*
Tetrachloro-m-xylene	*59*		*58 - 122*	*07/27/18 10:51*	*08/01/18 02:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	34000		2000	44	mg/Kg			07/31/18 12:32	1
Total Solids	55.6		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	56	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.7				%			07/27/18 14:22	1
Coarse Sand	0.5				%			07/27/18 14:22	1
Medium Sand	1.9				%			07/27/18 14:22	1
Fine Sand	28.2				%			07/27/18 14:22	1
Silt	55.9				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S064-0to2
Date Collected: 07/24/18 16:40
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-20
Matrix: Solid
Percent Solids: 55.6

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	12.7				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S064-2to3.5

Date Collected: 07/24/18 16:45
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-21

Matrix: Solid
Percent Solids: 56.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1300	B	43	3.9	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Acenaphthene	2100	B	43	5.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Acenaphthylene	430	B	43	4.3	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Anthracene	1500	B	43	5.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Benzo[a]anthracene	3100		43	6.5	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Benzo[a]pyrene	2500		43	3.4	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Benzo[b]fluoranthene	2800		43	5.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Benzo[g,h,i]perylene	2400		43	4.3	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Benzo[k]fluoranthene	780		43	5.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Chrysene	3400		43	13	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Dibenz(a,h)anthracene	230		43	6.2	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Fluoranthene	8500	B	43	12	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Fluorene	1800	B	43	4.3	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Indeno[1,2,3-cd]pyrene	2400		43	5.1	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Naphthalene	2600	B	43	6.8	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Phenanthrene	12000	B	43	5.9	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25
Pyrene	11000	B	43	8.3	ug/Kg	☼	07/29/18 10:35	08/02/18 18:52	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*82*		*57 - 120*	*07/29/18 10:35*	*08/02/18 18:52*	*25*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		6.7	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1
PCB-1221	ND		6.7	3.2	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1
PCB-1232	ND		6.7	1.6	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1
PCB-1242	ND		6.7	1.7	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1
PCB-1248	ND		6.7	0.54	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1
PCB-1254	ND		6.7	2.7	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1
PCB-1260	18		6.7	1.1	ug/Kg	☼	07/28/18 09:59	08/13/18 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*75*		*54 - 142*	*07/28/18 09:59*	*08/13/18 21:39*	*1*
Tetrachloro-m-xylene	*53*	*X*	*58 - 122*	*07/28/18 09:59*	*08/13/18 21:39*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	61000		2000	44	mg/Kg			07/31/18 12:37	1
Total Solids	56.4		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	54	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.6				%			07/27/18 14:22	1
Coarse Sand	0.3				%			07/27/18 14:22	1
Medium Sand	1.5				%			07/27/18 14:22	1
Fine Sand	28.7				%			07/27/18 14:22	1
Silt	57.8				%			07/27/18 14:22	1
Clay	11.1				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S064-3.5to4.8

Date Collected: 07/24/18 16:50
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-22

Matrix: Solid
Percent Solids: 55.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1400	B	45	4.0	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Acenaphthene	2100	B	45	5.4	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Acenaphthylene	500	B	45	4.5	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Anthracene	1600	B	45	5.4	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Benzo[a]anthracene	3900		45	6.8	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Benzo[a]pyrene	2800		45	3.6	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Benzo[b]fluoranthene	2800		45	5.3	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Benzo[g,h,i]perylene	2600		45	4.5	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Benzo[k]fluoranthene	1100		45	5.4	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Chrysene	4200		45	13	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Dibenz(a,h)anthracene	360		45	6.4	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Fluoranthene	9400	B	45	12	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Fluorene	1700	B	45	4.5	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Indeno[1,2,3-cd]pyrene	2400		45	5.4	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Naphthalene	2800	B	45	7.1	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Phenanthrene	13000	B	45	6.2	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25
Pyrene	13000	B	45	8.7	ug/Kg	☼	07/29/18 10:35	08/02/18 19:18	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*84*		*57 - 120*	*07/29/18 10:35*	*08/02/18 19:18*	*25*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.5	0.59	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1
PCB-1221	ND		3.5	1.6	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1
PCB-1232	ND		3.5	0.81	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1
PCB-1242	ND		3.5	0.85	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1
PCB-1248	ND		3.5	0.28	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1
PCB-1254	ND		3.5	1.4	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1
PCB-1260	14		3.5	0.59	ug/Kg	☼	07/27/18 10:51	08/01/18 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*60*		*54 - 142*	*07/27/18 10:51*	*08/01/18 03:10*	*1*
Tetrachloro-m-xylene	*55*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 03:10*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	180000		2000	44	mg/Kg			07/31/18 13:49	1
Total Solids	55.7		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	56	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 14:22	1
Coarse Sand	0.7				%			07/27/18 14:22	1
Medium Sand	1.2				%			07/27/18 14:22	1
Fine Sand	23.5				%			07/27/18 14:22	1
Silt	66.5				%			07/27/18 14:22	1
Clay	8.1				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S154-0to1

Date Collected: 07/24/18 15:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-23

Matrix: Solid
Percent Solids: 51.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		180	17	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Acenaphthene	ND		180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Acenaphthylene	**73**	**J**	180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Anthracene	**60**	**J**	180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Benzo[a]pyrene	**170**	**J**	180	15	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Benzo[b]fluoranthene	**220**		180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Benzo[g,h,i]perylene	**110**	**J**	180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Benzo[k]fluoranthene	**100**	**J**	180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Chrysene	**390**		180	55	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Dibenz(a,h)anthracene	**36**	**J**	180	26	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Fluoranthene	**330**		180	51	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Fluorene	**22**	**J**	180	18	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Indeno[1,2,3-cd]pyrene	**130**	**J**	180	22	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Naphthalene	**82**	**J B**	180	29	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Phenanthrene	**140**	**J B**	180	25	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50
Pyrene	**350**		180	36	ug/Kg	☼	07/27/18 13:53	07/29/18 23:55	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*79*		*57 - 120*	*07/27/18 13:53*	*07/29/18 23:55*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**230**		180	28	ug/Kg	☼	07/27/18 13:53	08/06/18 18:29	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.8	0.64	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1
PCB-1221	ND		3.8	1.8	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1
PCB-1232	**51**		3.8	0.89	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1
PCB-1242	**32**		3.8	0.92	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1
PCB-1248	ND		3.8	0.30	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1
PCB-1254	ND		3.8	1.5	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1
PCB-1260	**20**		3.8	0.64	ug/Kg	☼	07/27/18 10:51	08/01/18 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*74*		*54 - 142*	*07/27/18 10:51*	*08/01/18 03:27*	*1*
Tetrachloro-m-xylene	*72*		*58 - 122*	*07/27/18 10:51*	*08/01/18 03:27*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**28000**		2000	44	mg/Kg			07/31/18 12:50	1
Total Solids	**51.8**		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	**52**	**H**	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**0.2**				%			07/27/18 14:22	1
Coarse Sand	**0.2**				%			07/27/18 14:22	1
Medium Sand	**0.9**				%			07/27/18 14:22	1
Fine Sand	**16.7**				%			07/27/18 14:22	1
Silt	**68.7**				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S154-0to1
Date Collected: 07/24/18 15:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-23
Matrix: Solid
Percent Solids: 51.8

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	13.2				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S154-1to3

Date Collected: 07/24/18 15:35
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-24

Matrix: Solid
Percent Solids: 78.8

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	9.8	J F2 B	61	5.5	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Acenaphthene	ND		61	7.3	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Acenaphthylene	23	J B	61	6.1	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Anthracene	12	J F2 B	61	7.3	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Benzo[a]anthracene	43	J F2	61	9.2	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Benzo[a]pyrene	68	F1	61	4.9	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Benzo[b]fluoranthene	100	F2 F1	61	7.2	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Benzo[g,h,i]perylene	55	J	61	6.1	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Benzo[k]fluoranthene	33	J	61	7.3	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Chrysene	110	F2 F1	61	18	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Dibenz(a,h)anthracene	16	J	61	8.7	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Fluoranthene	120	F1 B	61	17	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Fluorene	8.8	J B	61	6.1	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Indeno[1,2,3-cd]pyrene	58	J	61	7.3	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Naphthalene	26	J F1 B	61	9.7	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Phenanthrene	50	J F2 F1 B	61	8.4	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50
Pyrene	170	F1 B	61	12	ug/Kg	☼	07/29/18 10:35	08/02/18 19:43	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*90*		*57 - 120*	*07/29/18 10:35*	*08/02/18 19:43*	*50*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1 F2	2.4	0.41	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1
PCB-1221	ND		2.4	1.2	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1
PCB-1232	ND		2.4	0.57	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1
PCB-1242	ND		2.4	0.59	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1
PCB-1248	ND		2.4	0.19	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1
PCB-1254	12	*	2.4	0.96	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1
PCB-1260	ND	F1	2.4	0.41	ug/Kg	☼	07/27/18 10:51	08/01/18 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*95*		*54 - 142*	*07/27/18 10:51*	*08/01/18 03:45*	*1*
Tetrachloro-m-xylene	*134*	*X*	*58 - 122*	*07/27/18 10:51*	*08/01/18 03:45*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	4200		2000	44	mg/Kg			07/31/18 10:51	1
Total Solids	78.8		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	77	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	4.8				%			07/27/18 14:22	1
Coarse Sand	2.1				%			07/27/18 14:22	1
Medium Sand	9.3				%			07/27/18 14:22	1
Fine Sand	71.8				%			07/27/18 14:22	1
Silt	7.1				%			07/27/18 14:22	1
Clay	4.9				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S154-3to4

Date Collected: 07/24/18 15:40
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-25

Matrix: Solid
Percent Solids: 74.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.69	J B	1.3	0.12	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Acenaphthene	0.38	J	1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Acenaphthylene	0.51	J	1.3	0.13	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Anthracene	0.19	J	1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Benzo[a]pyrene	1.3		1.3	0.10	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Benzo[b]fluoranthene	1.4		1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Benzo[g,h,i]perylene	0.71	J	1.3	0.13	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Benzo[k]fluoranthene	0.58	J	1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Chrysene	1.2	J	1.3	0.39	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Dibenz(a,h)anthracene	0.22	J	1.3	0.19	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Fluoranthene	2.3		1.3	0.36	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Fluorene	0.19	J	1.3	0.13	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Indeno[1,2,3-cd]pyrene	0.82	J	1.3	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Naphthalene	0.55	J B	1.3	0.21	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Phenanthrene	0.77	J B	1.3	0.18	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1
Pyrene	2.4		1.3	0.25	ug/Kg	☼	07/27/18 13:53	07/30/18 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*57 - 120*	*07/27/18 13:53*	*07/30/18 00:21*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	1.5		1.3	0.20	ug/Kg	☼	07/27/18 13:53	08/06/18 18:55	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.6	0.45	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1
PCB-1221	ND		2.6	1.2	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1
PCB-1232	ND		2.6	0.62	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1
PCB-1242	ND		2.6	0.64	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1
PCB-1248	ND		2.6	0.21	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1
PCB-1254	ND		2.6	1.0	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1
PCB-1260	ND		2.6	0.45	ug/Kg	☼	07/27/18 10:51	07/28/18 05:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*55*		*54 - 142*	*07/27/18 10:51*	*07/28/18 05:38*	*1*
Tetrachloro-m-xylene	*44*	*X*	*58 - 122*	*07/27/18 10:51*	*07/28/18 05:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	740	J	2000	44	mg/Kg			07/31/18 12:56	1
Total Solids	74.2		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	74	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.9				%			07/27/18 14:22	1
Coarse Sand	0.3				%			07/27/18 14:22	1
Medium Sand	0.3				%			07/27/18 14:22	1
Fine Sand	18.0				%			07/27/18 14:22	1
Silt	66.2				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S154-3to4
Date Collected: 07/24/18 15:40
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-25
Matrix: Solid
Percent Solids: 74.2

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	14.3				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S127-0to2

Date Collected: 07/24/18 17:45
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-26

Matrix: Solid
Percent Solids: 66.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	65000	B	150	13	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Acenaphthene	140000		150	18	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Acenaphthylene	1000		150	15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Anthracene	34000		150	18	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Benzo[a]pyrene	5600		150	12	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Benzo[b]fluoranthene	7800		150	17	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Benzo[g,h,i]perylene	3000		150	15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Benzo[k]fluoranthene	2300		150	18	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Chrysene	13000		150	44	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Dibenz(a,h)anthracene	450		150	21	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Fluoranthene	71000		150	41	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Fluorene	100000		150	15	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Indeno[1,2,3-cd]pyrene	3300		150	18	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Naphthalene	550	B	150	23	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50
Pyrene	59000		150	28	ug/Kg	☼	07/27/18 13:53	07/30/18 00:47	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*90*		*57 - 120*	*07/27/18 13:53*	*07/30/18 00:47*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	180000	B	2900	400	ug/Kg	☼	07/27/18 13:53	08/07/18 13:34	1000

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	13000		150	22	ug/Kg	☼	07/27/18 13:53	08/06/18 19:21	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.9	0.49	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1
PCB-1232	ND		2.9	0.68	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1
PCB-1242	ND		2.9	0.71	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1
PCB-1254	ND		2.9	1.1	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1
PCB-1260	10		2.9	0.49	ug/Kg	☼	07/27/18 10:51	07/28/18 05:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*	*X*	*54 - 142*	*07/27/18 10:51*	*07/28/18 05:55*	*1*
Tetrachloro-m-xylene	*491*	*X*	*58 - 122*	*07/27/18 10:51*	*07/28/18 05:55*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	7300		2000	44	mg/Kg			07/31/18 13:01	1
Total Solids	66.9		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	72	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.7				%			07/27/18 14:22	1
Coarse Sand	2.2				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S127-0to2
Date Collected: 07/24/18 17:45
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-26
Matrix: Solid
Percent Solids: 66.9

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Medium Sand	25.4				%			07/27/18 14:22	1
Fine Sand	37.2				%			07/27/18 14:22	1
Silt	28.8				%			07/27/18 14:22	1
Clay	5.6				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S127-2to4

Date Collected: 07/24/18 17:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-27

Matrix: Solid
Percent Solids: 66.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	85	B	7.1	0.64	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Acenaphthene	420		7.1	0.86	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Acenaphthylene	110		7.1	0.71	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Anthracene	190		7.1	0.86	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Benzo[a]pyrene	780		7.1	0.57	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Benzo[b]fluoranthene	920		7.1	0.84	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Benzo[g,h,i]perylene	600		7.1	0.71	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Benzo[k]fluoranthene	230		7.1	0.86	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Chrysene	1200		7.1	2.1	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Dibenz(a,h)anthracene	68		7.1	1.0	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Fluoranthene	3100		7.1	2.0	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Fluorene	180		7.1	0.71	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Indeno[1,2,3-cd]pyrene	580		7.1	0.86	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Naphthalene	160	B	7.1	1.1	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Phenanthrene	3500	B	7.1	0.99	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5
Pyrene	3600		7.1	1.4	ug/Kg	☼	07/27/18 13:53	07/30/18 01:13	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*87*		*57 - 120*	*07/27/18 13:53*	*07/30/18 01:13*	*5*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	920		7.1	1.1	ug/Kg	☼	07/27/18 13:53	08/06/18 19:47	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.9	0.49	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1
PCB-1232	ND		2.9	0.68	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1
PCB-1242	ND		2.9	0.71	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1
PCB-1254	ND		2.9	1.1	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1
PCB-1260	ND		2.9	0.49	ug/Kg	☼	07/27/18 10:51	07/28/18 06:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*54 - 142*	*07/27/18 10:51*	*07/28/18 06:13*	*1*
Tetrachloro-m-xylene	*40*	*X*	*58 - 122*	*07/27/18 10:51*	*07/28/18 06:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	7900		2000	44	mg/Kg			08/03/18 15:05	1
Total Solids	66.9		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	70	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			07/27/18 14:22	1
Coarse Sand	0.1				%			07/27/18 14:22	1
Medium Sand	9.4				%			07/27/18 14:22	1
Fine Sand	54.5				%			07/27/18 14:22	1
Silt	32.1				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S127-2to4
Date Collected: 07/24/18 17:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-27
Matrix: Solid
Percent Solids: 66.9

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	4.0				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S127-4to5.6

Date Collected: 07/24/18 17:35
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-28

Matrix: Solid
Percent Solids: 73.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	79	B	1.2	0.11	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Acenaphthene	190		1.2	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Acenaphthylene	26		1.2	0.12	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Anthracene	140		1.2	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Benzo[a]pyrene	190		1.2	0.10	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Benzo[b]fluoranthene	230		1.2	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Benzo[g,h,i]perylene	170		1.2	0.12	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Benzo[k]fluoranthene	69		1.2	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Chrysene	240		1.2	0.37	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Dibenz(a,h)anthracene	19		1.2	0.18	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Fluoranthene	650		1.2	0.35	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Fluorene	150		1.2	0.12	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Indeno[1,2,3-cd]pyrene	160		1.2	0.15	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Naphthalene	170	B	1.2	0.20	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Phenanthrene	850	B	1.2	0.17	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1
Pyrene	780		1.2	0.24	ug/Kg	☼	07/27/18 13:53	07/30/18 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*94*		*57 - 120*	*07/27/18 13:53*	*07/30/18 01:38*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	140		1.2	0.19	ug/Kg	☼	07/27/18 13:53	08/06/18 20:13	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.6	0.44	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1
PCB-1221	ND		2.6	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1
PCB-1232	ND		2.6	0.60	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1
PCB-1242	ND		2.6	0.63	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1
PCB-1248	ND		2.6	0.21	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1
PCB-1254	ND		2.6	1.0	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1
PCB-1260	36		2.6	0.44	ug/Kg	☼	07/28/18 09:59	08/13/18 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*66*		*54 - 142*	*07/28/18 09:59*	*08/13/18 21:57*	*1*
Tetrachloro-m-xylene	*76*		*58 - 122*	*07/28/18 09:59*	*08/13/18 21:57*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	5100		2000	44	mg/Kg			08/03/18 15:11	1
Total Solids	73.9		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	77	H	0.10	0.10	%			08/03/18 11:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	2.4				%			07/27/18 14:22	1
Coarse Sand	0.7				%			07/27/18 14:22	1
Medium Sand	20.9				%			07/27/18 14:22	1
Fine Sand	56.5				%			07/27/18 14:22	1
Silt	14.2				%			07/27/18 14:22	1

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S127-4to5.6
Date Collected: 07/24/18 17:35
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-28
Matrix: Solid
Percent Solids: 73.9

Method: D7928/D6913 - ASTM D7928/D6913 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	5.2				%			07/27/18 14:22	1

Client Sample ID: PDI-SC-S127-2to4D

Date Collected: 07/24/18 17:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-29

Matrix: Solid
Percent Solids: 66.3

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	160	B	7.4	0.66	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Acenaphthene	500		7.4	0.88	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Acenaphthylene	170		7.4	0.74	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Anthracene	290		7.4	0.88	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Benzo[a]pyrene	920		7.4	0.59	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Benzo[b]fluoranthene	1100		7.4	0.87	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Benzo[g,h,i]perylene	710		7.4	0.74	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Benzo[k]fluoranthene	260		7.4	0.88	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Chrysene	1300		7.4	2.2	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Dibenz(a,h)anthracene	81		7.4	1.1	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Fluoranthene	3700		7.4	2.1	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Fluorene	300		7.4	0.74	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Indeno[1,2,3-cd]pyrene	730		7.4	0.88	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Naphthalene	250	B	7.4	1.2	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Phenanthrene	4700	B	7.4	1.0	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5
Pyrene	4100		7.4	1.4	ug/Kg	☼	07/27/18 13:53	07/30/18 02:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*95*		*57 - 120*	*07/27/18 13:53*	*07/30/18 02:04*	*5*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	980		7.4	1.1	ug/Kg	☼	07/27/18 13:53	08/06/18 20:39	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.0	0.51	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1
PCB-1221	ND		3.0	1.4	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1
PCB-1232	ND		3.0	0.71	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1
PCB-1242	ND		3.0	0.74	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1
PCB-1248	ND		3.0	0.24	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1
PCB-1254	ND		3.0	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1
PCB-1260	24		3.0	0.51	ug/Kg	☼	07/28/18 09:59	08/13/18 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*54*		*54 - 142*	*07/28/18 09:59*	*08/13/18 22:15*	*1*
Tetrachloro-m-xylene	*90*		*58 - 122*	*07/28/18 09:59*	*08/13/18 22:15*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	8500		2000	44	mg/Kg			08/03/18 15:16	1
Total Solids	66.3		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	69	H	0.10	0.10	%			08/03/18 11:22	1

Client Sample ID: PDI-SC-S095-0to2D
Date Collected: 07/24/18 12:15
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-30
Matrix: Solid
Percent Solids: 55.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2500	B	170	15	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Acenaphthene	21000		170	20	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Acenaphthylene	1400		170	17	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Anthracene	25000		170	20	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Benzo[a]pyrene	32000		170	14	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Benzo[b]fluoranthene	29000		170	20	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Benzo[g,h,i]perylene	27000		170	17	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Benzo[k]fluoranthene	10000		170	20	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Chrysene	32000		170	51	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Dibenz(a,h)anthracene	2300		170	25	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Fluoranthene	98000		170	48	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Fluorene	16000		170	17	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Indeno[1,2,3-cd]pyrene	26000		170	20	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Naphthalene	6100	B	170	27	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Phenanthrene	130000	B	170	24	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50
Pyrene	130000		170	33	ug/Kg	☼	07/27/18 13:53	07/30/18 02:30	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*91*		*57 - 120*	*07/27/18 13:53*	*07/30/18 02:30*	*50*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	26000		170	26	ug/Kg	☼	07/27/18 13:53	08/06/18 21:05	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		6.8	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1
PCB-1221	ND		6.8	3.2	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1
PCB-1232	ND		6.8	1.6	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1
PCB-1242	ND		6.8	1.7	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1
PCB-1248	ND		6.8	0.54	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1
PCB-1254	ND		6.8	2.7	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1
PCB-1260	34		6.8	1.2	ug/Kg	☼	07/28/18 09:59	08/13/18 22:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*54 - 142*	*07/28/18 09:59*	*08/13/18 22:33*	*1*
Tetrachloro-m-xylene	*63*		*58 - 122*	*07/28/18 09:59*	*08/13/18 22:33*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	37000		2000	44	mg/Kg			08/03/18 15:21	1
Total Solids	55.7		0.1	0.1	%			07/26/18 15:23	1
Total Solids @ 70°C	57	H	0.10	0.10	%			08/03/18 11:22	1

Client Sample ID: PDI-RB-SS-180724

Date Collected: 07/24/18 14:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-31

Matrix: Water

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.098	0.018	ug/L		07/29/18 15:03	07/31/18 18:02	1
2-Methylnaphthalene	ND		0.098	0.020	ug/L		07/29/18 15:03	07/31/18 18:02	1
Acenaphthylene	ND		0.20	0.043	ug/L		07/29/18 15:03	07/31/18 18:02	1
Acenaphthene	ND	*	0.098	0.0059	ug/L		07/29/18 15:03	07/31/18 18:02	1
Fluorene	ND		0.098	0.013	ug/L		07/29/18 15:03	07/31/18 18:02	1
Phenanthrene	ND		0.098	0.019	ug/L		07/29/18 15:03	07/31/18 18:02	1
Anthracene	ND	*	0.098	0.0069	ug/L		07/29/18 15:03	07/31/18 18:02	1
Fluoranthene	ND		0.098	0.013	ug/L		07/29/18 15:03	07/31/18 18:02	1
Pyrene	ND	*	0.098	0.0088	ug/L		07/29/18 15:03	07/31/18 18:02	1
Benzo[a]anthracene	ND		0.098	0.0059	ug/L		07/29/18 15:03	07/31/18 18:02	1
Chrysene	ND		0.098	0.0059	ug/L		07/29/18 15:03	07/31/18 18:02	1
Benzo[b]fluoranthene	ND		0.098	0.0059	ug/L		07/29/18 15:03	07/31/18 18:02	1
Benzo[k]fluoranthene	ND		0.098	0.013	ug/L		07/29/18 15:03	07/31/18 18:02	1
Benzo[a]pyrene	ND		0.098	0.034	ug/L		07/29/18 15:03	07/31/18 18:02	1
Indeno[1,2,3-cd]pyrene	ND		0.098	0.0059	ug/L		07/29/18 15:03	07/31/18 18:02	1
Dibenz(a,h)anthracene	ND		0.098	0.0059	ug/L		07/29/18 15:03	07/31/18 18:02	1
Benzo[g,h,i]perylene	ND		0.20	0.075	ug/L		07/29/18 15:03	07/31/18 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*86*		*54 - 120*	*07/29/18 15:03*	*07/31/18 18:02*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.46	0.063	ug/L		07/31/18 13:19	08/03/18 21:58	1
PCB-1221	ND		0.46	0.077	ug/L		07/31/18 13:19	08/03/18 21:58	1
PCB-1232	ND		0.46	0.065	ug/L		07/31/18 13:19	08/03/18 21:58	1
PCB-1242	ND		0.46	0.061	ug/L		07/31/18 13:19	08/03/18 21:58	1
PCB-1248	ND		0.46	0.054	ug/L		07/31/18 13:19	08/03/18 21:58	1
PCB-1254	ND		0.46	0.077	ug/L		07/31/18 13:19	08/03/18 21:58	1
PCB-1260	ND		0.46	0.063	ug/L		07/31/18 13:19	08/03/18 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*57*		*38 - 140*	*07/31/18 13:19*	*08/03/18 21:58*	*1*
Tetrachloro-m-xylene	*68*		*40 - 120*	*07/31/18 13:19*	*08/03/18 21:58*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**0.25**	**J**	1.0	0.19	mg/L			07/27/18 12:01	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-280203/1-A
Matrix: Solid
Analysis Batch: 280309

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280203

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.590	J	1.0	0.090	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Acenaphthylene	0.160	J	1.0	0.10	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Acenaphthene	0.237	J	1.0	0.12	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Anthracene	0.140	J	1.0	0.12	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Benzo[a]anthracene	0.203	J	1.0	0.15	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Chrysene	ND		1.0	0.30	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Fluoranthene	ND		1.0	0.28	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Benzo[b]fluoranthene	ND		1.0	0.12	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Fluorene	0.226	J	1.0	0.10	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Benzo[k]fluoranthene	0.162	J	1.0	0.12	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Benzo[a]pyrene	0.146	J	1.0	0.080	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Naphthalene	0.391	J	1.0	0.16	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.12	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Phenanthrene	0.653	J	1.0	0.14	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Dibenz(a,h)anthracene	ND		1.0	0.14	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Pyrene	0.212	J	1.0	0.19	ug/Kg		07/27/18 09:37	07/28/18 17:48	1
Benzo[g,h,i]perylene	ND		1.0	0.10	ug/Kg		07/27/18 09:37	07/28/18 17:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*89*		*57 - 120*	*07/27/18 09:37*	*07/28/18 17:48*	*1*

Lab Sample ID: LCS 580-280203/2-A
Matrix: Solid
Analysis Batch: 280309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	185		ug/Kg		92	68 - 120
Acenaphthylene	200	186		ug/Kg		93	68 - 120
Acenaphthene	200	188		ug/Kg		94	68 - 120
Anthracene	200	187		ug/Kg		94	73 - 125
Benzo[a]anthracene	200	202		ug/Kg		101	66 - 120
Chrysene	200	221		ug/Kg		111	69 - 120
Fluoranthene	200	188		ug/Kg		94	74 - 125
Benzo[b]fluoranthene	200	210		ug/Kg		105	63 - 121
Fluorene	200	191		ug/Kg		96	73 - 120
Benzo[k]fluoranthene	200	226		ug/Kg		113	63 - 123
Benzo[a]pyrene	200	225		ug/Kg		113	72 - 124
Naphthalene	200	184		ug/Kg		92	70 - 120
Indeno[1,2,3-cd]pyrene	200	254	*	ug/Kg		127	65 - 121
Phenanthrene	200	182		ug/Kg		91	73 - 120
Dibenz(a,h)anthracene	200	247		ug/Kg		123	70 - 125
Pyrene	200	187		ug/Kg		94	70 - 120
Benzo[g,h,i]perylene	200	223		ug/Kg		111	63 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*86*		*57 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 580-280231/1-A
Matrix: Solid
Analysis Batch: 280341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280231

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.159	J	1.0	0.090	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Acenaphthylene	ND		1.0	0.10	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Acenaphthene	ND		1.0	0.12	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Anthracene	ND		1.0	0.12	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Benzo[a]anthracene	ND		1.0	0.15	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Chrysene	ND		1.0	0.30	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Fluoranthene	ND		1.0	0.28	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Benzo[b]fluoranthene	ND		1.0	0.12	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Fluorene	ND		1.0	0.10	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Benzo[k]fluoranthene	ND		1.0	0.12	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Benzo[a]pyrene	ND		1.0	0.080	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Naphthalene	0.409	J	1.0	0.16	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.12	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Phenanthrene	0.183	J	1.0	0.14	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Dibenz(a,h)anthracene	ND		1.0	0.14	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Pyrene	ND		1.0	0.19	ug/Kg		07/27/18 13:53	07/29/18 16:58	1
Benzo[g,h,i]perylene	ND		1.0	0.10	ug/Kg		07/27/18 13:53	07/29/18 16:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*57 - 120*	*07/27/18 13:53*	*07/29/18 16:58*	*1*

Lab Sample ID: LCS 580-280231/2-A
Matrix: Solid
Analysis Batch: 280717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	219		ug/Kg		109	68 - 120
Acenaphthylene	200	197		ug/Kg		99	68 - 120
Acenaphthene	200	207		ug/Kg		103	68 - 120
Anthracene	200	215		ug/Kg		108	73 - 125
Benzo[a]anthracene	200	206		ug/Kg		103	66 - 120
Chrysene	200	190		ug/Kg		95	69 - 120
Fluoranthene	200	204		ug/Kg		102	74 - 125
Benzo[b]fluoranthene	200	195		ug/Kg		98	63 - 121
Fluorene	200	215		ug/Kg		108	73 - 120
Benzo[k]fluoranthene	200	211		ug/Kg		105	63 - 123
Benzo[a]pyrene	200	197		ug/Kg		98	72 - 124
Naphthalene	200	197		ug/Kg		98	70 - 120
Indeno[1,2,3-cd]pyrene	200	200		ug/Kg		100	65 - 121
Phenanthrene	200	197		ug/Kg		99	73 - 120
Dibenz(a,h)anthracene	200	214		ug/Kg		107	70 - 125
Pyrene	200	199		ug/Kg		100	70 - 120
Benzo[g,h,i]perylene	200	217		ug/Kg		108	63 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*95*		*57 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 580-79099-7 MS
Matrix: Solid
Analysis Batch: 280341

Client Sample ID: PDI-SC-S061-0to3
Prep Type: Total/NA
Prep Batch: 280231

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	49	B	239	280		ug/Kg	☼	96	68 - 120
Acenaphthylene	45		239	259		ug/Kg	☼	89	68 - 120
Acenaphthene	31		239	280		ug/Kg	☼	104	68 - 120
Anthracene	98		239	372		ug/Kg	☼	115	73 - 125
Chrysene	560	F2 F1	239	627	F1	ug/Kg	☼	29	69 - 120
Fluoranthene	960		239	982	4	ug/Kg	☼	8	74 - 125
Benzo[b]fluoranthene	770	F2 F1	239	811	F1	ug/Kg	☼	16	63 - 121
Fluorene	42		239	315		ug/Kg	☼	114	73 - 120
Benzo[k]fluoranthene	210		239	445		ug/Kg	☼	98	63 - 123
Benzo[a]pyrene	630	F2 F1	239	716	F1	ug/Kg	☼	37	72 - 124
Naphthalene	88	B	239	264		ug/Kg	☼	74	70 - 120
Indeno[1,2,3-cd]pyrene	560	F1	239	699	F1	ug/Kg	☼	60	65 - 121
Phenanthrene	300	B	239	500		ug/Kg	☼	85	73 - 120
Dibenz(a,h)anthracene	81		239	313		ug/Kg	☼	97	70 - 125
Pyrene	1400		239	1330	4	ug/Kg	☼	-34	70 - 120
Benzo[g,h,i]perylene	550		239	719		ug/Kg	☼	72	63 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14	*95*		*57 - 120*

Lab Sample ID: 580-79099-7 MSD
Matrix: Solid
Analysis Batch: 280341

Client Sample ID: PDI-SC-S061-0to3
Prep Type: Total/NA
Prep Batch: 280231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	49	B	235	268		ug/Kg	☼	93	68 - 120	4	12
Acenaphthylene	45		235	245		ug/Kg	☼	85	68 - 120	5	12
Acenaphthene	31		235	273		ug/Kg	☼	103	68 - 120	2	12
Anthracene	98		235	361		ug/Kg	☼	112	73 - 125	3	12
Chrysene	560	F2 F1	235	753	F2	ug/Kg	☼	83	69 - 120	18	10
Fluoranthene	960		235	1120	4	ug/Kg	☼	67	74 - 125	13	13
Benzo[b]fluoranthene	770	F2 F1	235	987	F2	ug/Kg	☼	91	63 - 121	20	10
Fluorene	42		235	300		ug/Kg	☼	109	73 - 120	5	13
Benzo[k]fluoranthene	210		235	500		ug/Kg	☼	123	63 - 123	12	15
Benzo[a]pyrene	630	F2 F1	235	861	F2	ug/Kg	☼	99	72 - 124	18	12
Naphthalene	88	B	235	258		ug/Kg	☼	72	70 - 120	3	12
Indeno[1,2,3-cd]pyrene	560	F1	235	794		ug/Kg	☼	101	65 - 121	13	15
Phenanthrene	300	B	235	529		ug/Kg	☼	99	73 - 120	6	11
Dibenz(a,h)anthracene	81		235	351		ug/Kg	☼	115	70 - 125	12	13
Pyrene	1400		235	1460	4	ug/Kg	☼	23	70 - 120	10	12
Benzo[g,h,i]perylene	550		235	829		ug/Kg	☼	120	63 - 120	14	14

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*94*		*57 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 580-280319/1-A
Matrix: Solid
Analysis Batch: 280717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280319

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.251	J	1.0	0.090	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Acenaphthylene	0.305	J	1.0	0.10	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Acenaphthene	0.171	J	1.0	0.12	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Anthracene	0.271	J	1.0	0.12	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Benzo[a]anthracene	ND		1.0	0.15	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Chrysene	ND		1.0	0.30	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Fluoranthene	0.346	J	1.0	0.28	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Benzo[b]fluoranthene	ND		1.0	0.12	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Fluorene	0.382	J	1.0	0.10	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Benzo[k]fluoranthene	ND		1.0	0.12	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Benzo[a]pyrene	ND		1.0	0.080	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Naphthalene	0.466	J	1.0	0.16	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.12	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Phenanthrene	1.82		1.0	0.14	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Dibenz(a,h)anthracene	ND		1.0	0.14	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Pyrene	0.210	J	1.0	0.19	ug/Kg		07/29/18 10:35	08/02/18 17:10	1
Benzo[g,h,i]perylene	ND		1.0	0.10	ug/Kg		07/29/18 10:35	08/02/18 17:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*101*		*57 - 120*	*07/29/18 10:35*	*08/02/18 17:10*	*1*

Lab Sample ID: LCS 580-280319/2-A
Matrix: Solid
Analysis Batch: 280717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280319

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	194		ug/Kg		97	68 - 120
Acenaphthylene	200	171		ug/Kg		86	68 - 120
Acenaphthene	200	182		ug/Kg		91	68 - 120
Anthracene	200	200		ug/Kg		100	73 - 125
Benzo[a]anthracene	200	207		ug/Kg		104	66 - 120
Chrysene	200	186		ug/Kg		93	69 - 120
Fluoranthene	200	194		ug/Kg		97	74 - 125
Benzo[b]fluoranthene	200	180		ug/Kg		90	63 - 121
Fluorene	200	189		ug/Kg		94	73 - 120
Benzo[k]fluoranthene	200	193		ug/Kg		96	63 - 123
Benzo[a]pyrene	200	181		ug/Kg		91	72 - 124
Naphthalene	200	172		ug/Kg		86	70 - 120
Indeno[1,2,3-cd]pyrene	200	188		ug/Kg		94	65 - 121
Phenanthrene	200	187		ug/Kg		93	73 - 120
Dibenz(a,h)anthracene	200	196		ug/Kg		98	70 - 125
Pyrene	200	196		ug/Kg		98	70 - 120
Benzo[g,h,i]perylene	200	198		ug/Kg		99	63 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*98*		*57 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 580-79099-24 MS
Matrix: Solid
Analysis Batch: 280717

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA
Prep Batch: 280319

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	9.8	J F2 B	231	199		ug/Kg	☼	82	68 - 120
Acenaphthene	ND		231	212		ug/Kg	☼	92	68 - 120
Acenaphthylene	23	J B	231	215		ug/Kg	☼	83	68 - 120
Anthracene	12	J F2 B	231	257		ug/Kg	☼	106	73 - 125
Benzo[a]anthracene	43	J F2	231	287		ug/Kg	☼	105	66 - 120
Benzo[a]pyrene	68	F1	231	239		ug/Kg	☼	74	72 - 124
Benzo[b]fluoranthene	100	F2 F1	231	284		ug/Kg	☼	79	63 - 121
Benzo[g,h,i]perylene	55	J	231	240		ug/Kg	☼	80	63 - 120
Benzo[k]fluoranthene	33	J	231	200		ug/Kg	☼	72	63 - 123
Chrysene	110	F2 F1	231	262	F1	ug/Kg	☼	68	69 - 120
Dibenz(a,h)anthracene	16	J	231	196		ug/Kg	☼	78	70 - 125
Fluoranthene	120	F1 B	231	320		ug/Kg	☼	86	74 - 125
Fluorene	8.8	J B	231	217		ug/Kg	☼	90	73 - 120
Indeno[1,2,3-cd]pyrene	58	J	231	255		ug/Kg	☼	85	65 - 121
Naphthalene	26	J F1 B	231	185	F1	ug/Kg	☼	68	70 - 120
Phenanthrene	50	J F2 F1 B	231	266		ug/Kg	☼	94	73 - 120
Pyrene	170	F1 B	231	371		ug/Kg	☼	86	70 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14	*90*		*57 - 120*

Lab Sample ID: 580-79099-24 MSD
Matrix: Solid
Analysis Batch: 280717

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA
Prep Batch: 280319

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	9.8	J F2 B	241	174	F2	ug/Kg	☼	68	68 - 120	14	12
Acenaphthene	ND		241	187		ug/Kg	☼	78	68 - 120	12	12
Acenaphthylene	23	J B	241	191		ug/Kg	☼	69	68 - 120	12	12
Anthracene	12	J F2 B	241	220	F2	ug/Kg	☼	87	73 - 125	15	12
Benzo[a]anthracene	43	J F2	241	241	F2	ug/Kg	☼	82	66 - 120	17	14
Benzo[a]pyrene	68	F1	241	225	F1	ug/Kg	☼	65	72 - 124	6	12
Benzo[b]fluoranthene	100	F2 F1	241	237	F2 F1	ug/Kg	☼	56	63 - 121	18	10
Benzo[g,h,i]perylene	55	J	241	239		ug/Kg	☼	76	63 - 120	0	14
Benzo[k]fluoranthene	33	J	241	209		ug/Kg	☼	73	63 - 123	4	15
Chrysene	110	F2 F1	241	225	F2 F1	ug/Kg	☼	49	69 - 120	16	10
Dibenz(a,h)anthracene	16	J	241	183		ug/Kg	☼	70	70 - 125	6	13
Fluoranthene	120	F1 B	241	284	F1	ug/Kg	☼	68	74 - 125	12	13
Fluorene	8.8	J B	241	201		ug/Kg	☼	80	73 - 120	8	13
Indeno[1,2,3-cd]pyrene	58	J	241	237		ug/Kg	☼	74	65 - 121	7	15
Naphthalene	26	J F1 B	241	164	F1	ug/Kg	☼	57	70 - 120	12	12
Phenanthrene	50	J F2 F1 B	241	220	F2 F1	ug/Kg	☼	71	73 - 120	19	11
Pyrene	170	F1 B	241	329	F1	ug/Kg	☼	65	70 - 120	12	12

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*81*		*57 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 580-280340/1-A
Matrix: Water
Analysis Batch: 280511

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.10	0.020	ug/L		07/29/18 15:03	07/31/18 16:49	1
Acenaphthylene	ND		0.20	0.044	ug/L		07/29/18 15:03	07/31/18 16:49	1
Acenaphthene	ND		0.10	0.0060	ug/L		07/29/18 15:03	07/31/18 16:49	1
Anthracene	ND		0.10	0.0070	ug/L		07/29/18 15:03	07/31/18 16:49	1
Benzo[a]anthracene	ND		0.10	0.0060	ug/L		07/29/18 15:03	07/31/18 16:49	1
Chrysene	ND		0.10	0.0060	ug/L		07/29/18 15:03	07/31/18 16:49	1
Fluoranthene	ND		0.10	0.013	ug/L		07/29/18 15:03	07/31/18 16:49	1
Benzo[b]fluoranthene	ND		0.10	0.0060	ug/L		07/29/18 15:03	07/31/18 16:49	1
Fluorene	ND		0.10	0.013	ug/L		07/29/18 15:03	07/31/18 16:49	1
Benzo[k]fluoranthene	ND		0.10	0.013	ug/L		07/29/18 15:03	07/31/18 16:49	1
Benzo[a]pyrene	ND		0.10	0.035	ug/L		07/29/18 15:03	07/31/18 16:49	1
Naphthalene	ND		0.10	0.018	ug/L		07/29/18 15:03	07/31/18 16:49	1
Indeno[1,2,3-cd]pyrene	ND		0.10	0.0060	ug/L		07/29/18 15:03	07/31/18 16:49	1
Phenanthrene	ND		0.10	0.019	ug/L		07/29/18 15:03	07/31/18 16:49	1
Dibenz(a,h)anthracene	ND		0.10	0.0060	ug/L		07/29/18 15:03	07/31/18 16:49	1
Pyrene	ND		0.10	0.0090	ug/L		07/29/18 15:03	07/31/18 16:49	1
Benzo[g,h,i]perylene	ND		0.20	0.076	ug/L		07/29/18 15:03	07/31/18 16:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*89*		*54 - 120*	*07/29/18 15:03*	*07/31/18 16:49*	*1*

Lab Sample ID: LCS 580-280340/2-A
Matrix: Water
Analysis Batch: 280511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	2.00	1.45		ug/L		73	53 - 120
Acenaphthylene	2.00	1.51		ug/L		75	33 - 130
Acenaphthene	2.00	1.45		ug/L		72	64 - 120
Anthracene	2.00	1.68		ug/L		84	46 - 127
Benzo[a]anthracene	2.00	1.90		ug/L		95	70 - 120
Chrysene	2.00	1.78		ug/L		89	65 - 120
Fluoranthene	2.00	1.88		ug/L		94	72 - 120
Benzo[b]fluoranthene	2.00	1.97		ug/L		98	57 - 132
Fluorene	2.00	1.61		ug/L		81	67 - 120
Benzo[k]fluoranthene	2.00	1.83		ug/L		91	61 - 132
Benzo[a]pyrene	2.00	1.76		ug/L		88	23 - 141
Naphthalene	2.00	1.40		ug/L		70	58 - 120
Indeno[1,2,3-cd]pyrene	2.00	1.90		ug/L		95	53 - 133
Phenanthrene	2.00	1.58		ug/L		79	69 - 120
Dibenz(a,h)anthracene	2.00	1.91		ug/L		96	57 - 132
Pyrene	2.00	1.85		ug/L		92	57 - 133
Benzo[g,h,i]perylene	2.00	1.82		ug/L		91	52 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*81*		*54 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 580-280340/3-A
Matrix: Water
Analysis Batch: 280511

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 280340

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	2.00	1.53		ug/L		77	53 - 120	5	23
Acenaphthylene	2.00	1.60		ug/L		80	33 - 130	6	34
Acenaphthene	2.00	1.25	*	ug/L		63	64 - 120	15	20
Anthracene	2.00	1.35	*	ug/L		67	46 - 127	22	19
Benzo[a]anthracene	2.00	1.81		ug/L		91	70 - 120	5	17
Chrysene	2.00	1.87		ug/L		93	65 - 120	5	19
Fluoranthene	2.00	1.98		ug/L		99	72 - 120	5	21
Benzo[b]fluoranthene	2.00	2.04		ug/L		102	57 - 132	4	25
Fluorene	2.00	1.71		ug/L		85	67 - 120	6	20
Benzo[k]fluoranthene	2.00	1.92		ug/L		96	61 - 132	5	22
Benzo[a]pyrene	2.00	1.63		ug/L		82	23 - 141	7	35
Naphthalene	2.00	1.48		ug/L		74	58 - 120	6	23
Indeno[1,2,3-cd]pyrene	2.00	1.95		ug/L		97	53 - 133	3	25
Phenanthrene	2.00	1.69		ug/L		85	69 - 120	7	21
Dibenz(a,h)anthracene	2.00	2.00		ug/L		100	57 - 132	5	24
Pyrene	2.00	1.47	*	ug/L		73	57 - 133	23	21
Benzo[g,h,i]perylene	2.00	1.81		ug/L		91	52 - 129	0	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*82*		*54 - 120*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) - RA

Lab Sample ID: 580-79099-7 MS
Matrix: Solid
Analysis Batch: 280894

Client Sample ID: PDI-SC-S061-0to3
Prep Type: Total/NA
Prep Batch: 280231

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]anthracene - RA	540	F1	239	686	F1	ug/Kg	☼	60	66 - 120

Lab Sample ID: 580-79099-7 MSD
Matrix: Solid
Analysis Batch: 280894

Client Sample ID: PDI-SC-S061-0to3
Prep Type: Total/NA
Prep Batch: 280231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene - RA	540	F1	235	735		ug/Kg	☼	82	66 - 120	7	14

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-280212/1-A
Matrix: Solid
Analysis Batch: 280273

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280212

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.0	0.34	ug/Kg		07/27/18 10:51	07/27/18 21:06	1
PCB-1221	ND		2.0	0.95	ug/Kg		07/27/18 10:51	07/27/18 21:06	1
PCB-1232	ND		2.0	0.47	ug/Kg		07/27/18 10:51	07/27/18 21:06	1
PCB-1242	ND		2.0	0.49	ug/Kg		07/27/18 10:51	07/27/18 21:06	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 580-280212/1-A
Matrix: Solid
Analysis Batch: 280273

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280212

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		2.0	0.16	ug/Kg		07/27/18 10:51	07/27/18 21:06	1
PCB-1254	ND		2.0	0.79	ug/Kg		07/27/18 10:51	07/27/18 21:06	1
PCB-1260	ND		2.0	0.34	ug/Kg		07/27/18 10:51	07/27/18 21:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*78*		*54 - 142*	*07/27/18 10:51*	*07/27/18 21:06*	*1*
Tetrachloro-m-xylene	*69*		*58 - 122*	*07/27/18 10:51*	*07/27/18 21:06*	*1*

Lab Sample ID: LCS 580-280212/2-A
Matrix: Solid
Analysis Batch: 280273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280212

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	10.0	8.73		ug/Kg		87	64 - 120
PCB-1260	10.0	8.95		ug/Kg		90	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*81*		*54 - 142*
Tetrachloro-m-xylene	*72*		*58 - 122*

Lab Sample ID: 580-79099-24 MS
Matrix: Solid
Analysis Batch: 280527

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA
Prep Batch: 280212

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND	F1 F2	11.8	175	E F1	ug/Kg	☼	1482	64 - 120
PCB-1260	ND	F1	11.8	878	E F1	ug/Kg	☼	7457	63 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*95*		*54 - 142*
Tetrachloro-m-xylene	*166*	*X*	*58 - 122*

Lab Sample ID: 580-79099-24 MSD
Matrix: Solid
Analysis Batch: 280527

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA
Prep Batch: 280212

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND	F1 F2	12.6	327	E F1 F2	ug/Kg	☼	2604	64 - 120	61	21
PCB-1260	ND	F1	12.6	1080	E F1	ug/Kg	☼	8600	63 - 130	21	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*131*		*54 - 142*
Tetrachloro-m-xylene	*163*	*X*	*58 - 122*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 580-280286/1-A
Matrix: Solid
Analysis Batch: 281356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280286

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.0	0.34	ug/Kg		07/28/18 09:59	08/13/18 16:56	1
PCB-1221	ND		2.0	0.95	ug/Kg		07/28/18 09:59	08/13/18 16:56	1
PCB-1232	ND		2.0	0.47	ug/Kg		07/28/18 09:59	08/13/18 16:56	1
PCB-1242	ND		2.0	0.49	ug/Kg		07/28/18 09:59	08/13/18 16:56	1
PCB-1248	ND		2.0	0.16	ug/Kg		07/28/18 09:59	08/13/18 16:56	1
PCB-1254	ND		2.0	0.79	ug/Kg		07/28/18 09:59	08/13/18 16:56	1
PCB-1260	ND		2.0	0.34	ug/Kg		07/28/18 09:59	08/13/18 16:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*92*		*54 - 142*	*07/28/18 09:59*	*08/13/18 16:56*	*1*
Tetrachloro-m-xylene	*70*		*58 - 122*	*07/28/18 09:59*	*08/13/18 16:56*	*1*

Lab Sample ID: LCS 580-280286/2-A
Matrix: Solid
Analysis Batch: 281356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280286

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	10.0	8.47		ug/Kg		85	64 - 120
PCB-1260	10.0	7.61		ug/Kg		76	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*82*		*54 - 142*
Tetrachloro-m-xylene	*69*		*58 - 122*

Lab Sample ID: MB 580-280483/1-A
Matrix: Water
Analysis Batch: 280814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280483

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.45	0.061	ug/L		07/31/18 13:19	08/03/18 21:05	1
PCB-1221	ND		0.45	0.075	ug/L		07/31/18 13:19	08/03/18 21:05	1
PCB-1232	ND		0.45	0.063	ug/L		07/31/18 13:19	08/03/18 21:05	1
PCB-1242	ND		0.45	0.059	ug/L		07/31/18 13:19	08/03/18 21:05	1
PCB-1248	ND		0.45	0.052	ug/L		07/31/18 13:19	08/03/18 21:05	1
PCB-1254	ND		0.45	0.075	ug/L		07/31/18 13:19	08/03/18 21:05	1
PCB-1260	ND		0.45	0.061	ug/L		07/31/18 13:19	08/03/18 21:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*63*		*38 - 140*	*07/31/18 13:19*	*08/03/18 21:05*	*1*
Tetrachloro-m-xylene	*75*		*40 - 120*	*07/31/18 13:19*	*08/03/18 21:05*	*1*

Lab Sample ID: LCS 580-280483/2-A
Matrix: Water
Analysis Batch: 280814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280483

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.00	0.734		ug/L		73	50 - 121

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 580-280483/2-A
Matrix: Water
Analysis Batch: 280814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280483

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1260			1.00	0.714		ug/L		71	55 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*67*		*38 - 140*
Tetrachloro-m-xylene	*77*		*40 - 120*

Lab Sample ID: LCSD 580-280483/3-A
Matrix: Water
Analysis Batch: 280814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 280483

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.00	0.736		ug/L		74	50 - 121	0	25
PCB-1260			1.00	0.758		ug/L		76	55 - 132	6	22

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*70*		*38 - 140*
Tetrachloro-m-xylene	*78*		*40 - 120*

Method: 9060_PSEP - TOC (Puget Sound)

Lab Sample ID: MB 580-280598/3
Matrix: Solid
Analysis Batch: 280598

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			07/31/18 10:43	1

Lab Sample ID: LCS 580-280598/4
Matrix: Solid
Analysis Batch: 280598

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			4270	3950		mg/Kg		92	68 - 149		

Lab Sample ID: LCSD 580-280598/5
Matrix: Solid
Analysis Batch: 280598

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			4270	3880		mg/Kg		91	68 - 149	2	32

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

Lab Sample ID: 580-79099-24 MS
Matrix: Solid
Analysis Batch: 280598

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	4200		120000	124000		mg/Kg		100	68 - 149

Lab Sample ID: 580-79099-24 MSD
Matrix: Solid
Analysis Batch: 280598

Client Sample ID: PDI-SC-S154-1to3
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	4200		120000	121000		mg/Kg		97	68 - 149	2	32

Lab Sample ID: 580-79099-24 DU
Matrix: Solid
Analysis Batch: 280598

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Duplicates	4200		4000		mg/Kg		4	50

Lab Sample ID: 580-79099-24 TRL
Matrix: Solid
Analysis Batch: 280598

Client Sample ID: PDI-SC-S154-1to3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	TRL Result	TRL Qualifier	Unit	D	RSD	RSD Limit
Total Organic Carbon - Duplicates	4200		5760		mg/Kg		21	20

Lab Sample ID: MB 580-280722/3
Matrix: Solid
Analysis Batch: 280722

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			08/02/18 15:19	1

Lab Sample ID: LCS 580-280722/4
Matrix: Solid
Analysis Batch: 280722

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	4270	4240		mg/Kg		99	68 - 149

Lab Sample ID: LCSD 580-280722/5
Matrix: Solid
Analysis Batch: 280722

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	4270	4040		mg/Kg		95	68 - 149	5	32

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

Lab Sample ID: MB 580-280879/3
Matrix: Solid
Analysis Batch: 280879

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			08/03/18 13:24	1

Lab Sample ID: LCS 580-280879/4
Matrix: Solid
Analysis Batch: 280879

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			4270	4150		mg/Kg		97	68 - 149		

Lab Sample ID: LCSD 580-280879/5
Matrix: Solid
Analysis Batch: 280879

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			4270	4200		mg/Kg		98	68 - 149	1	32

Method: D 2216 - Percent Moisture

Lab Sample ID: 580-79099-6 DU
Matrix: Solid
Analysis Batch: 280150

Client Sample ID: PDI-SC-S042-4to6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids	63.4			65.7		%				4	20

Method: Moisture 70C - Percent Moisture, 70 C

Lab Sample ID: 580-79099-15 DU
Matrix: Solid
Analysis Batch: 280777

Client Sample ID: PDI-SC-S082-2to4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids @ 70°C	59	H		59		%				0.9	20

Lab Sample ID: 580-79099-29 DU
Matrix: Solid
Analysis Batch: 280778

Client Sample ID: PDI-SC-S127-2to4D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids @ 70°C	69	H		66		%				4	20

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-280355/3
Matrix: Water
Analysis Batch: 280355

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	ND		1.0	0.19	mg/L			07/27/18 12:01	1

Lab Sample ID: LCS 580-280355/4
Matrix: Water
Analysis Batch: 280355

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	10.0	9.71		mg/L		97	85 - 115

Method: D7928/D6913 - ASTM D7928/D6913

Lab Sample ID: 580-79099-15 DU
Matrix: Solid
Analysis Batch: 280234

Client Sample ID: PDI-SC-S082-2to4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Gravel	0.1		0.5	F3	%		133	20
Coarse Sand	0.3		0.2	F3	%		40	20
Medium Sand	2.1		2.1		%		0	20
Fine Sand	34.3		34.6		%		0.9	20
Silt	55.3		54.5		%		1	20
Clay	7.9		8.2		%		4	20

Client Sample ID: PDI-SC-S045-0to2
Date Collected: 07/23/18 09:55
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:15	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S045-0to2
Date Collected: 07/23/18 09:55
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-1
Matrix: Solid
Percent Solids: 76.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280203	07/27/18 09:37	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		5	280309	07/28/18 23:42	T1W	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 19:00	CSC	TAL SEA

Client Sample ID: PDI-SC-S045-2to4
Date Collected: 07/23/18 10:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:20	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S045-2to4
Date Collected: 07/23/18 10:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-2
Matrix: Solid
Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280203	07/27/18 09:37	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		2	280309	07/29/18 00:04	T1W	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 19:18	CSC	TAL SEA

Client Sample ID: PDI-SC-S045-4to6
Date Collected: 07/23/18 10:05
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:25	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA

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

TestAmerica Job ID: 580-79099-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S045-4to6

Lab Sample ID: 580-79099-3
Date Collected: 07/23/18 10:05
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 73.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280203	07/27/18 09:37	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		1	280309	07/29/18 00:27	T1W	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 19:35	CSC	TAL SEA

Client Sample ID: PDI-SC-S042-0to2

Lab Sample ID: 580-79099-4
Date Collected: 07/23/18 11:25
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:30	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S042-0to2

Lab Sample ID: 580-79099-4
Date Collected: 07/23/18 11:25
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 54.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280203	07/27/18 09:37	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		10	280309	07/29/18 00:48	T1W	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 19:53	CSC	TAL SEA

Client Sample ID: PDI-SC-S042-2to4

Lab Sample ID: 580-79099-5
Date Collected: 07/23/18 11:30
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:36	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S042-2to4

Lab Sample ID: 580-79099-5
Date Collected: 07/23/18 11:30
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 64.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280203	07/27/18 09:37	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		10	280309	07/29/18 01:11	T1W	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 20:11	CSC	TAL SEA

Client Sample ID: PDI-SC-S042-4to6

Lab Sample ID: 580-79099-6
Date Collected: 07/23/18 11:35
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:41	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S042-4to6

Lab Sample ID: 580-79099-6
Date Collected: 07/23/18 11:35
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 63.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280203	07/27/18 09:37	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		10	280309	07/29/18 01:33	T1W	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 20:28	CSC	TAL SEA

Client Sample ID: PDI-SC-S061-0to3

Lab Sample ID: 580-79099-7
Date Collected: 07/23/18 13:40
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280722	08/02/18 16:33	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S061-0to3

Lab Sample ID: 580-79099-7
Date Collected: 07/23/18 13:40
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		5	280341	07/29/18 17:50	CJ	TAL SEA

Client Sample ID: PDI-SC-S061-0to3

Lab Sample ID: 580-79099-7
Date Collected: 07/23/18 13:40
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	5	280894	08/06/18 12:26	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 00:13	TL1	TAL SEA

Client Sample ID: PDI-SC-S061-3to4.5

Lab Sample ID: 580-79099-8
Date Collected: 07/23/18 13:45
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280722	08/02/18 16:44	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S061-3to4.5

Lab Sample ID: 580-79099-8
Date Collected: 07/23/18 13:45
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 61.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/29/18 19:09	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 13:43	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 00:31	TL1	TAL SEA

Client Sample ID: PDI-SC-S061-4.5to6

Lab Sample ID: 580-79099-9
Date Collected: 07/23/18 13:50
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 14:44	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S061-4.5to6

Lab Sample ID: 580-79099-9
Date Collected: 07/23/18 13:50
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 70.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		1	280341	07/29/18 19:35	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	1	280894	08/06/18 14:09	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 00:49	TL1	TAL SEA

Client Sample ID: PDI-SC-S066-0to2

Lab Sample ID: 580-79099-10
Date Collected: 07/23/18 15:20
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 14:49	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S066-0to2

Lab Sample ID: 580-79099-10
Date Collected: 07/23/18 15:20
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		1	280341	07/29/18 20:01	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	1	280894	08/06/18 14:35	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 01:06	TL1	TAL SEA

Client Sample ID: PDI-SC-S066-2to4

Lab Sample ID: 580-79099-11
Date Collected: 07/23/18 15:25
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:46	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S066-2to4

Lab Sample ID: 580-79099-11
Date Collected: 07/23/18 15:25
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 62.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/29/18 20:27	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 15:01	ERZ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 20:46	CSC	TAL SEA

Client Sample ID: PDI-SC-S066-4to5.8

Lab Sample ID: 580-79099-12
Date Collected: 07/23/18 15:30
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:52	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S066-4to5.8

Lab Sample ID: 580-79099-12
Date Collected: 07/23/18 15:30
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		10	280341	07/29/18 20:53	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	10	280894	08/06/18 15:27	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 01:24	TL1	TAL SEA

Client Sample ID: PDI-SC-S066-5.8to6.6

Lab Sample ID: 580-79099-13
Date Collected: 07/23/18 15:35
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 14:54	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S066-5.8to6.6

Lab Sample ID: 580-79099-13
Date Collected: 07/23/18 15:35
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 69.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		5	280341	07/29/18 21:19	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	5	280894	08/06/18 15:53	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 01:42	TL1	TAL SEA

Client Sample ID: PDI-SC-S082-0to2

Lab Sample ID: 580-79099-14
Date Collected: 07/24/18 10:00
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 15:00	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280205	07/27/18 09:40	A1K	TAL SEA

Client Sample ID: PDI-SC-S082-0to2

Lab Sample ID: 580-79099-14
Date Collected: 07/24/18 10:00
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 51.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/29/18 21:45	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 16:19	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 01:59	TL1	TAL SEA

Client Sample ID: PDI-SC-S082-2to4

Lab Sample ID: 580-79099-15
Date Collected: 07/24/18 10:05
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 11:57	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S082-2to4

Lab Sample ID: 580-79099-15
Date Collected: 07/24/18 10:05
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 60.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		25	280341	07/29/18 22:11	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	25	280894	08/06/18 16:45	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280273	07/28/18 00:38	TL1	TAL SEA

Client Sample ID: PDI-SC-S082-4to6

Lab Sample ID: 580-79099-16
Date Collected: 07/24/18 10:10
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:09	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S082-4to6

Lab Sample ID: 580-79099-16
Date Collected: 07/24/18 10:10
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 66.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280319	07/29/18 10:35	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		10	280717	08/02/18 18:01	CJ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 21:04	CSC	TAL SEA

Client Sample ID: PDI-SC-S095-0to2

Lab Sample ID: 580-79099-17
Date Collected: 07/24/18 12:15
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:14	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S095-0to2

Lab Sample ID: 580-79099-17
Date Collected: 07/24/18 12:15
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 54.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/29/18 22:37	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 17:11	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 02:17	TL1	TAL SEA

Client Sample ID: PDI-SC-S095-2to4

Lab Sample ID: 580-79099-18
Date Collected: 07/24/18 12:20
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:20	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S095-2to4

Lab Sample ID: 580-79099-18
Date Collected: 07/24/18 12:20
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 58.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280319	07/29/18 10:35	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280717	08/02/18 18:27	CJ	TAL SEA
Total/NA	Prep	3546	DL		280319	07/29/18 10:35	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	DL	1000	281022	08/07/18 13:09	ERZ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 21:22	CSC	TAL SEA

Client Sample ID: PDI-SC-S095-4to6

Lab Sample ID: 580-79099-19
Date Collected: 07/24/18 12:25
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:26	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S095-4to6

Lab Sample ID: 580-79099-19
Date Collected: 07/24/18 12:25
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 60.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/29/18 23:03	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 17:37	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 02:34	TL1	TAL SEA

Client Sample ID: PDI-SC-S064-0to2

Lab Sample ID: 580-79099-20
Date Collected: 07/24/18 16:40
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:32	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S064-0to2

Lab Sample ID: 580-79099-20
Date Collected: 07/24/18 16:40
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 55.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		10	280341	07/29/18 23:29	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	10	280894	08/06/18 18:03	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 02:52	TL1	TAL SEA

Client Sample ID: PDI-SC-S064-2to3.5

Lab Sample ID: 580-79099-21
Date Collected: 07/24/18 16:45
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:37	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S064-2to3.5

Lab Sample ID: 580-79099-21
Date Collected: 07/24/18 16:45
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 56.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280319	07/29/18 10:35	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		25	280717	08/02/18 18:52	CJ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 21:39	CSC	TAL SEA

Client Sample ID: PDI-SC-S064-3.5to4.8

Lab Sample ID: 580-79099-22
Date Collected: 07/24/18 16:50
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 13:49	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S064-3.5to4.8

Lab Sample ID: 580-79099-22
Date Collected: 07/24/18 16:50
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 55.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280319	07/29/18 10:35	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		25	280717	08/02/18 19:18	CJ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 03:10	TL1	TAL SEA

Client Sample ID: PDI-SC-S154-0to1

Lab Sample ID: 580-79099-23
Date Collected: 07/24/18 15:30
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:50	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S154-0to1

Lab Sample ID: 580-79099-23
Date Collected: 07/24/18 15:30
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 51.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/29/18 23:55	CJ	TAL SEA

Client Sample ID: PDI-SC-S154-0to1

Lab Sample ID: 580-79099-23

Date Collected: 07/24/18 15:30

Matrix: Solid

Date Received: 07/25/18 13:50

Percent Solids: 51.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 18:29	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 03:27	TL1	TAL SEA

Client Sample ID: PDI-SC-S154-1to3

Lab Sample ID: 580-79099-24

Date Collected: 07/24/18 15:35

Matrix: Solid

Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 10:51	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S154-1to3

Lab Sample ID: 580-79099-24

Date Collected: 07/24/18 15:35

Matrix: Solid

Date Received: 07/25/18 13:50

Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280319	07/29/18 10:35	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280717	08/02/18 19:43	CJ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280527	08/01/18 03:45	TL1	TAL SEA

Client Sample ID: PDI-SC-S154-3to4

Lab Sample ID: 580-79099-25

Date Collected: 07/24/18 15:40

Matrix: Solid

Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 12:56	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S154-3to4

Lab Sample ID: 580-79099-25

Date Collected: 07/24/18 15:40

Matrix: Solid

Date Received: 07/25/18 13:50

Percent Solids: 74.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		1	280341	07/30/18 00:21	CJ	TAL SEA

Client Sample ID: PDI-SC-S154-3to4

Lab Sample ID: 580-79099-25
Date Collected: 07/24/18 15:40
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 74.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	1	280894	08/06/18 18:55	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280274	07/28/18 05:38	TL1	TAL SEA

Client Sample ID: PDI-SC-S127-0to2

Lab Sample ID: 580-79099-26
Date Collected: 07/24/18 17:45
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280598	07/31/18 13:01	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S127-0to2

Lab Sample ID: 580-79099-26
Date Collected: 07/24/18 17:45
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 66.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/30/18 00:47	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 19:21	ERZ	TAL SEA
Total/NA	Prep	3546	DL		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	DL	1000	281022	08/07/18 13:34	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280274	07/28/18 05:55	TL1	TAL SEA

Client Sample ID: PDI-SC-S127-2to4

Lab Sample ID: 580-79099-27
Date Collected: 07/24/18 17:30
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 15:05	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S127-2to4

Lab Sample ID: 580-79099-27
Date Collected: 07/24/18 17:30
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 66.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		5	280341	07/30/18 01:13	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	5	280894	08/06/18 19:47	ERZ	TAL SEA
Total/NA	Prep	3550B			280212	07/27/18 10:51	TTN	TAL SEA
Total/NA	Analysis	8082A		1	280274	07/28/18 06:13	TL1	TAL SEA

Client Sample ID: PDI-SC-S127-4to5.6

Lab Sample ID: 580-79099-28
Date Collected: 07/24/18 17:35
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 15:11	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280777	08/03/18 11:04	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	280234	07/27/18 14:22	A1K	TAL SEA

Client Sample ID: PDI-SC-S127-4to5.6

Lab Sample ID: 580-79099-28
Date Collected: 07/24/18 17:35
Matrix: Solid
Date Received: 07/25/18 13:50
Percent Solids: 73.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		1	280341	07/30/18 01:38	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	1	280894	08/06/18 20:13	ERZ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 21:57	CSC	TAL SEA

Client Sample ID: PDI-SC-S127-2to4D

Lab Sample ID: 580-79099-29
Date Collected: 07/24/18 17:30
Matrix: Solid
Date Received: 07/25/18 13:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 15:16	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280778	08/03/18 11:22	HJM	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-79099-1

Client Sample ID: PDI-SC-S127-2to4D
Date Collected: 07/24/18 17:30
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-29
Matrix: Solid
Percent Solids: 66.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		5	280341	07/30/18 02:04	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	5	280894	08/06/18 20:39	ERZ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 22:15	CSC	TAL SEA

Client Sample ID: PDI-SC-S095-0to2D
Date Collected: 07/24/18 12:15
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-30
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	280879	08/03/18 15:21	Z1T	TAL SEA
Total/NA	Analysis	D 2216		1	280150	07/26/18 15:23	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	280778	08/03/18 11:22	HJM	TAL SEA

Client Sample ID: PDI-SC-S095-0to2D
Date Collected: 07/24/18 12:15
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-30
Matrix: Solid
Percent Solids: 55.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM		50	280341	07/30/18 02:30	CJ	TAL SEA
Total/NA	Prep	3546	RA		280231	07/27/18 13:53	KMS	TAL SEA
Total/NA	Analysis	8270D SIM	RA	50	280894	08/06/18 21:05	ERZ	TAL SEA
Total/NA	Prep	3550B			280286	07/28/18 09:59	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281356	08/13/18 22:33	CSC	TAL SEA

Client Sample ID: PDI-RB-SS-180724
Date Collected: 07/24/18 14:00
Date Received: 07/25/18 13:50

Lab Sample ID: 580-79099-31
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			280340	07/29/18 15:03	JSM	TAL SEA
Total/NA	Analysis	8270D SIM		1	280511	07/31/18 18:02	CJ	TAL SEA
Total/NA	Prep	3510C			280483	07/31/18 13:19	JCM	TAL SEA
Total/NA	Analysis	8082A		1	280814	08/03/18 21:58	TL1	TAL SEA
Total/NA	Analysis	SM 5310B		1	280355	07/27/18 12:01	ASJ	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: 580-79099-1
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
Nevada	State Program	9	WA000502019-1	07-31-19
Oregon	NELAP	10	WA100007	11-05-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
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: 580-79099-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-79099-1	PDI-SC-S045-0to2	Solid	07/23/18 09:55	07/25/18 13:50
580-79099-2	PDI-SC-S045-2to4	Solid	07/23/18 10:00	07/25/18 13:50
580-79099-3	PDI-SC-S045-4to6	Solid	07/23/18 10:05	07/25/18 13:50
580-79099-4	PDI-SC-S042-0to2	Solid	07/23/18 11:25	07/25/18 13:50
580-79099-5	PDI-SC-S042-2to4	Solid	07/23/18 11:30	07/25/18 13:50
580-79099-6	PDI-SC-S042-4to6	Solid	07/23/18 11:35	07/25/18 13:50
580-79099-7	PDI-SC-S061-0to3	Solid	07/23/18 13:40	07/25/18 13:50
580-79099-8	PDI-SC-S061-3to4.5	Solid	07/23/18 13:45	07/25/18 13:50
580-79099-9	PDI-SC-S061-4.5to6	Solid	07/23/18 13:50	07/25/18 13:50
580-79099-10	PDI-SC-S066-0to2	Solid	07/23/18 15:20	07/25/18 13:50
580-79099-11	PDI-SC-S066-2to4	Solid	07/23/18 15:25	07/25/18 13:50
580-79099-12	PDI-SC-S066-4to5.8	Solid	07/23/18 15:30	07/25/18 13:50
580-79099-13	PDI-SC-S066-5.8to6.6	Solid	07/23/18 15:35	07/25/18 13:50
580-79099-14	PDI-SC-S082-0to2	Solid	07/24/18 10:00	07/25/18 13:50
580-79099-15	PDI-SC-S082-2to4	Solid	07/24/18 10:05	07/25/18 13:50
580-79099-16	PDI-SC-S082-4to6	Solid	07/24/18 10:10	07/25/18 13:50
580-79099-17	PDI-SC-S095-0to2	Solid	07/24/18 12:15	07/25/18 13:50
580-79099-18	PDI-SC-S095-2to4	Solid	07/24/18 12:20	07/25/18 13:50
580-79099-19	PDI-SC-S095-4to6	Solid	07/24/18 12:25	07/25/18 13:50
580-79099-20	PDI-SC-S064-0to2	Solid	07/24/18 16:40	07/25/18 13:50
580-79099-21	PDI-SC-S064-2to3.5	Solid	07/24/18 16:45	07/25/18 13:50
580-79099-22	PDI-SC-S064-3.5to4.8	Solid	07/24/18 16:50	07/25/18 13:50
580-79099-23	PDI-SC-S154-0to1	Solid	07/24/18 15:30	07/25/18 13:50
580-79099-24	PDI-SC-S154-1to3	Solid	07/24/18 15:35	07/25/18 13:50
580-79099-25	PDI-SC-S154-3to4	Solid	07/24/18 15:40	07/25/18 13:50
580-79099-26	PDI-SC-S127-0to2	Solid	07/24/18 17:45	07/25/18 13:50
580-79099-27	PDI-SC-S127-2to4	Solid	07/24/18 17:30	07/25/18 13:50
580-79099-28	PDI-SC-S127-4to5.6	Solid	07/24/18 17:35	07/25/18 13:50
580-79099-29	PDI-SC-S127-2to4D	Solid	07/24/18 17:30	07/25/18 13:50
580-79099-30	PDI-SC-S095-0to2D	Solid	07/24/18 12:15	07/25/18 13:50
580-79099-31	PDI-RB-SS-180724	Water	07/24/18 14:00	07/25/18 13:50

SUBSURFACE 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: 7/25/18** **Carrier: Courier**	COC No: 1 1 of 2 pages
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: Subsurface Sediment Sample Type:	**Analysis Turnaround Time** Calendar (C) or Work Days (W) _W_ [x] 21 days [ ] Other _____			

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCDD/Fs 1613B	Archive	Grain size ASTM D7928/D6913	PCB Aroclors, PAHs, Total Organic Carbon, Total Solids 8082A, 8270D-SIM, 9060, 160.3	Atterberg Limits ASTM D4318	Sample Specific Notes:
PDI-SC-S045 - 0 to 2	7/23/2018	9:55	SC		TP	4		x	x	x	x		
PDI-SC-S045 - 2 to 4	7/23/2018	10:00	SC		TP	4		x	x	x	x		
PDI-SC-S045 - 4 to 6	7/23/2018	10:05	SC		TP	4		x	x	x	x		
PDI-SC-S042 - 0 to 2	7/23/2018	11:25	SC		TP	4		x	x	x	x		
PDI-SC-S042 - 2 to 4	7/23/2018	11:30	SC		TP	4		x	x	x	x		
PDI-SC-S042 - 4 to 6	7/23/2018	11:35	SC		TP	4		x	x	x	x		
PDI-SC-S061 - 0 to 3	7/23/2018	13:40	SC		TP	4		x	x	x	x		
PDI-SC-S061 - 3 to 4.5	7/23/2018	13:45	SC		TP	4		x	x	x	x		
PDI-SC-S061 - 4.5 to 6	7/23/2018	13:50	SC		TP	4		x	x	x	x		
PDI-SC-S066 - 0 to 2	7/23/2018	15:20	SC		TP	4		x	x	x	x		
PDI-SC-S066 - 2 to 4	7/23/2018	15:25	SC		TP	4		x	x	x	x		
PDI-SC-S066 - 4 to 5.8	7/23/2018	15:30	SC		TP	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Col								AG	AG	WMG	WMG	AG	

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: **Separate reports for each lab**

027, 409, 364, 207, 163, 300

Relinquished by: [signature]	Company: AECOM	Date/Time: 7-25-18 1310	Received by: [signature]
Relinquished by: [signature]	Company: M.E.	Date/Time: 7/25/18 1350	Received by: [signature]
Relinquished by:	Company:	Date/Time:	Received by:

Company: M.E.	Date/Time: 7/25/18 1310	
Company: APOR	Date/Time: 7/25/18 1350	
Company:	Date/Time:	

SUBSURFACE 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: 7/25/18** **Carrier: Courier**
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: Subsurface Sediment Sample Type:	**Analysis Turnaround Time** Calendar (C) or Work Days (W) W [x] 21 days [ ] Other _____		COC No: 1 3 2 of 2 pages

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCDD/Fs 1613B	Archive	Grain size ASTM D7928/D6913	PCB Aroclors, PAHs, Total Organic Carbon, Total Solids 8082A, 8270D-SIM, 9060, 160.3	Atterberg Limits ASTM D4318	Sample Specific Notes:
PDI-SC-S066 - 5.8 to 6.6	7/23/2018	15:35	SC		TP	4		x	x	x	x		
PDI-SC-S082 - 0 to 2	7/24/2018	10:00	SC		TP	4		x	x	x	x		
PDI-SC-S082 - 2 to 4	7/24/2018	10:05	SC		TP	4		x	x	x	x		
PDI-SC-S082 - 4 to 6	7/24/2018	10:10	SC		TP	4		x	x	x	x		
PDI-SC-S095 - 0 to 2	7/24/2018	12:15	SC		JS	4		x	x	x	x		
PDI-SC-S095 - 2 to 4	7/24/2018	12:20	SC		JS	4		x	x	x	x		
PDI-SC-S095 - 4 to 6	7/24/2018	12:25	SC		JS	4		x	x	x	x		
PDI-SC-S064 - 0 to 2	7/24/2018	16:40	SC		TP	4		x	x	x	x		
PDI-SC-S064 - 2 to 3.5	7/24/2018	16:45	SC		TP	4		x	x	x	x		
PDI-SC-S064 - 3.5 to 4.8	7/24/2018	16:50	SC		TP	4		x	x	x	x		
PDI-SC-S154 - 0 to 1	7/24/2018	15:30	SC		~~TP~~ JS	4		x	x	x	x		
PDI-SC-S154 - 1 to 3	7/24/2018	15:35	SC	MS/MSD	~~TP~~ JS	6		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Col								AG	AG	WMG	WMG	AG	
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: **Separate reports for each lab**

Relinquished by:	Company: AECOM	Date/Time: 7-25-18 1305	Received by:	Company: M.E.	Date/Time: 7/25/18 1310
Relinquished by:	Company: M.E.	Date/Time: 7/25/18 1350	Received by:	Company: TAPOR	Date/Time: 7/25/18 1350
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

SUBSURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**			
Client Contact	**Project Contact: Amy Dahl / Chelsey Cook**	**Site Contact: Jennifer Ray / Michaela McCoog**	**Date: 7/25/18**
AECOM	**Tel: (206) 438-2261 / (206) 438-2010**	**Laboratory Contact: Elaine-Walker**	**Carrier: Courier**
1111 3rd Ave Suite 1600	**Analysis Turnaround Time**		COC No: 1
Seattle, WA 98101	Calendar (C) or Work Days (W) _W_____		3 of 3 pages
Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR	[x] 21 days [ ] Other _____		
Project #: 60566335 Study: Subsurface Sediment			
Sample Type:			

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCDD/Fs 1613B	Archive	Grain size ASTM D7928/D6913	PCB Aroclors, PAHs, Total Organic Carbon, Total Solids 8082A, 8270D-SIM, 9060, 160.3	Atterberg Limits ASTM D4318	OIF	PCB	PAH	TOC	Sample Specific Notes:
PDI-SC-S154 - 3 to 4	7/24/2018	15:40	SC		JS	4		x	x	x	x						
~~PDI-SC-S154 - 4 to 6~~	~~7/24/2018~~	~~15:45~~	~~SC~~			4		x	x	x	x						
PDI-SC-S127 - 0 to 2	7/24/2018	17:45	SC		JS	4		x	x	x	x						
PDI-SC-S127 - 2 to 4	7/24/2018	17:30	SC		JS	4		x	x	x	x						
PDI-SC-S127 - 4 to 5.6	7/24/2018	17:35	SC		JS	4		x	x	x	x						
~~PDI-SC-S127 - 0 to 1~~	~~7/24/2018~~	~~18:00~~	~~SC~~			4		x	x	x	x						
PDI-SC-S127 - 2 to 4D	7/24/2018	17:30	SC		JS	~~4~~ 3		x	x	x	x						
~~PDI-SC-S127~~																	
PDI-SC-S095-0to2D	7/24/18	12:15	SC		JS	3		X	X		X						
PDI-RB-SS-180724	7/24/18	14:00	W		JS	8							X	X	X	X	
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Col								AG	AG	WMG	WMG	AG					

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: **Separate reports for each lab**

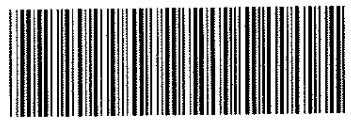
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michael Mg	AECOM	7-25-18 1325	Jessica Nyr	M-E-	7/25/18 1310
Jennifer Ray	M.E.	7/25/18 1350		TAPOR	7/25/18 1350
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

SUBSURFACE 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: 7/25/18** **Carrier: Courier**	COC No: 1 1 of 2 pages

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: **Subsurface Sediment** Sample Type	Calendar (C) or Work Days (W) W [x] 21 days [ ] Other _____

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCDD/Fs 1613B	Archive	Grain size ASTM D7928/D6913	PCB Aroclors, PAHs, Total Organic Carbon, Total Solids 8082A, 8270D-SIM, 9060, 160.3	Atterberg Limits ASTM D4318	Sample Specific Notes:
PDI-SC-S045 - 0 to 2	7/23/2018	9:55	SC		TP	4		x	x	x	x		
PDI-SC-S045 - 2 to 4	7/23/2018	10:00	SC		TP	4		x	x	x	x		
PDI-SC-S045 - 4 to 6	7/23/2018	10:05	SC		TP	4		x	x	x	x		
PDI-SC-S042 - 0 to 2	7/23/2018	11:25	SC		TP	4		x	x	x	x		
PDI-SC-S042 - 2 to 4	7/23/2018	11:30	SC		TP	4		x	x	x	x		
PDI-SC-S042 - 4 to 6	7/23/2018	11:35	SC		TP	4		x	x	x	x		
PDI-SC-S061 - 0 to 3	7/23/2018	13:40	SC		TP	4		x	x	x	x		
PDI-SC-S061 - 3 to 4.5	7/23/2018	13:45	SC		TP	4		x	x	x	x		
PDI-SC-S061 - 4.5 to 6	7/23/2018	13:50	SC		TP	4		x	x	x	x		
PDI-SC-S066 - 0 to 2	7/23/2018	15:20	SC		TP	4		x	x	x	x		
PDI-SC-S066 - 2 to 4	7/23/2018	15:25	SC		TP	4		x	x	x	x		
PDI-SC-S066 - 4 to 5.8	7/23/2018	15:30	SC		TP	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Col								AG	AG	WMG	WMG	AG	



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: **Separate reports for each lab**

007, 409, 364, 207, 163, 330

Relinquished by:	Company: AECOM	Date/Time: 7-25-18 1310	Received by:	Company: M.E.	Date/Time: 7/25/18 1310
Relinquished by:	Company: M.E.	Date/Time: 7/25/18 1350	Received by:	Company: TAPOR	Date/Time: 7/25/18 1350
Relinquished by:	Company: TAPOR	Date/Time: 7/25/18 1700	Received by:	Company: TA-Sea	Date/Time:

IR5 = 1.0/1.0
IR5 = 3.3/3.3 w/c.s.
IR5 = -1.4/-1.4

SUBSURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**			
Client Contact	**Project Contact: Amy Dahl / Chelsey Cook**	**Site Contact: Jennifer Ray / Michaela McCoog**	**Date: 7/25/18**
AECOM	**Tel: (206) 438-2261 / (206) 438-2010**	**Laboratory Contact: Elaine-Walker**	**Carrier: Courier**
1111 3rd Ave Suite 1600	**Analysis Turnaround Time**		COC No: 1 2 of 2 pages
Seattle, WA 98101	Calendar (C) or Work Days (W) W		
Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR	[x] 21 days [ ] Other _____		
Project #: 60566335 Study: **Subsurface Sediment**			
Sample Type:			

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCDD/Fs 1613B	Archive	Grain size ASTM D7928/D6913	PCB Aroclors, PAHs, Total Organic Carbon, Total Solids 8082A, 8270D-SIM, 9060, 160.3	Atterberg Limits ASTM D4318												Sample Specific Notes:
PDI-SC-S066 - 5.8 to 6.6	7/23/2018	15:35	SC		TP	4		x	x	x	x													
PDI-SC-S082 - 0 to 2	7/24/2018	10:00	SC		TP	4		x	x	x	x													
PDI-SC-S082 - 2 to 4	7/24/2018	10:05	SC		TP	4		x	x	x	x													
PDI-SC-S082 - 4 to 6	7/24/2018	10:10	SC		TP	4		x	x	x	x													
PDI-SC-S095 - 0 to 2	7/24/2018	12:15	SC		JS	4		x	x	x	x													
PDI-SC-S095 - 2 to 4	7/24/2018	12:20	SC		JS	4		x	x	x	x													
PDI-SC-S095 - 4 to 6	7/24/2018	12:25	SC		JS	4		x	x	x	x													
PDI-SC-S064 - 0 to 2	7/24/2018	16:40	SC		TP	4		x	x	x	x													
PDI-SC-S064 - 2 to 3.5	7/24/2018	16:45	SC		TP	4		x	x	x	x													
PDI-SC-S064 - 3.5 to 4.8	7/24/2018	16:50	SC		TP	4		x	x	x	x													
PDI-SC-S154 - 0 to 1	7/24/2018	15:30	SC		~~TP~~ JS	4		x	x	x	x													
PDI-SC-S154 - 1 to 3	7/24/2018	15:35	SC	MS/MSD	~~TP~~ JS	6		x	x	x	x													
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Col								AG	AG	WMG	WMG	AG												
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: **Separate reports for each lab**

IR5 { 1.0/1.0, 3.3/3.3, -1.4/-1.4

Relinquished by: Michael	Company: AECOM	Date/Time: 7-25-18 1335	Received by:	Company: M.E.	Date/Time: 7/25/18 1310
Relinquished by:	Company: M.E.	Date/Time: 7/25/18 1350	Received by:	Company: TAPOR	Date/Time: 7/25/18 1350
Relinquished by:	Company: TAPOR	Date/Time: 7/25/18 1700	Received by: Tom Blunt	Company: TA-Sea	Date/Time: 7/26/18 0915

SUBSURFACE SEDIMENT
CHAIN OF CUSTODY

TestAmerica-Seattle 5755-8th-Street-East Tacoma, WA 98424-1317 **Ph: 253-922-2310 Fax: 253-922-5047**			
Client Contact	**Project Contact: Amy Dahl / Chelsey Cook**	**Site Contact: Jennifer Ray / Michaela McCoog**	**Date: 7/25/18**
AECOM	**Tel: (206) 438-2261 / (206) 438-2010**	**Laboratory Contact: Elaine-Walker**	**Carrier: Courier**
1111 3rd Ave Suite 1600	**Analysis Turnaround Time**		COC No: 1
Seattle, WA 98101	Calendar (C) or Work Days (W) W		3 of 3 pages
Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR	[x] 21 days [ ] Other		
Project #: 60566335 Study: Subsurface Sediment			
Sample Type:			

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	PCDD/Fs 1613B	Archive	Grain size ASTM D7928/D6913	PCB Aroclors, PAHs, Total Organic Carbon, Total Solids 8082A, 8270D-SIM, 9060, 160.3	Atterberg Limits ASTM D4318	OLF	PCB	PAH	TOC	Sample Specific Notes:
PDI-SC-S154 - 3 to 4	7/24/2018	15:40	SC		JS	4		x	x	x	x						
~~PDI-SC-S154 - 4 to 6~~	~~7/24/2018~~	~~15:45~~	~~SC~~			4		x	x	x	x						
PDI-SC-S127 - 0 to 2	7/24/2018	17:45	SC		JS	4		x	x	x	x						
PDI-SC-S127 - 2 to 4	7/24/2018	17:30	SC		JS	4		x	x	x	x						
PDI-SC-S127 - 4 to ~~6~~ 5.6	7/24/2018	17:35	SC		JS	4		x	x	x	x						
~~PDI-SC-S127 - 0 to 1~~	~~7/24/2018~~	~~18:00~~	~~SC~~			4		x	x	x	x						
PDI-SC-S127 - 2 to 4D	7/24/2018	17:30	SC		JS	3		x	x	x	x						
~~PDI-SC-S095~~																	
PDI-SC-S095-0to2D	7/24/18	12:15	SC		JS	3		X	X		X						
PDI-RB-SS-180724	7/24/18	14:00	W		JS	8							X	X	X	X	
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Col								AG	AG	WMG	WMG	AG					

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: **Separate reports for each lab**

IR5 { 1.0/1.0 ; 3.3/3.3 ; -1.4/-1.4

Relinquished by:	Company: AECOM	Date/Time: 7-25-18 1325	Received by:	Company: M.E.	Date/Time: 7/25/18 1310
Relinquished by:	Company: M.E.	Date/Time: 7/25/18 1350	Received by:	Company: TAPOR	Date/Time: 7/25/18 1350
Relinquished by:	Company: TAMR	Date/Time: 7/25/18 1700	Received by:	Company: TA-Sea	Date/Time: 7/26/18 0915

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-79099-1

Login Number: 79099
List Number: 1
Creator: Antonson, Angeline D

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.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	