TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 580-79329-1
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
Project: Portland Harbor Pre-Remedial Design
Report Number: 580-79329-1

REVISION 1: NOVEMBER 9, 2018
This revision was required for the following: The PCB data was re-evaluated for the following samples for proper Aroclor itentification: PDI-SC-S144-0to2 (580-79329-1), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S218-2to4.5 (580-79329-11) and PDI-SC-S178-4.7to6.7 (580-79329-20). In addition the narrative was reviewed and any narrative additions are indictated in bold type below..

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
Forty-six samples were received on 8/3/2018 1:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 8 coolers at receipt time were 1.2º C, 1.7º C, 2.2º C, 2.3º C, 2.4º C, 3.1º C, 3.9º C and 4.6º C.

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

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

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-S144-0to2 (580-79329-1), PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-0to2D (580-79329-8), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), PDI-SC-S178-2to3.7 (580-79329-18), PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21), PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-4to6 (580-79329-31), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-10to12 (580-79329-34), PDI-SC-S032-12to14 (580-79329-35), PDI-SC-S172-0to2 (580-79329-36), PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-8to10 (580-79329-38) and PDI-SC-S228-0to2.3 (580-79329-39) were analyzed for semivolatile organic compounds - Selected Ion Mode (SIM) in accordance with SW846 8270D_SIM. The samples were prepared on 08/06/2018, 08/07/2018, 08/08/2018, 08/10/2018 and 08/20/2018 and analyzed on 08/08/2018, 08/09/2018, 08/10/2018, 08/13/2018, 08/16/2018 and 08/21/2018.

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The 8270D SIM reference spectra for Fluoranthene is incorrect in the raw data for sample PDI-SC-S086-0to2D (580-79329-8), however, this reference spectra is correct for all other samples in this job and this reference spectra can be utilized for review of data for the sample that does not have the correct spectra.

Several analytes were detected in method blank MB 580-280938/1-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. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples were not performed.

Several analytes were detected in method blank MB 580-281014/1-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. Those target analytes concentration were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Several analytes were detected in method blank MB 580-281134/1-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. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples were not performed.

2-Methylnaphthalene and Naphthalene were detected in method blank MB 580-281359/1-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. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples were not performed.

2-Methylnaphthalene and Naphthalene were detected in method blank MB 580-281984/1-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. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples were not performed.

Re-extraction and re-analysis of the following samples was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. Therefore both sets of data are reported. PDI-SC-S172-0to2 (580-79329-36), PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-6to8 (580-79329-37[MS]), PDI-SC-S218-6to8 (580-79329-37[MSD]), PDI-SC-S218-8to10 (580-79329-38), PDI-SC-S228-0to2.3 (580-79329-39), (LCS 580-281984/2-A) and (MB 580-281984/1-A)

Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene failed the recovery criteria high for LCS 580-281359/2-A. These analytes were outside the Marginal Exceedance Limits; therefore, re-extraction and/or re-analysis were performed. However, since the re-extraction was outside of holding time, both sets of data are reported.

Benzo[a]anthracene, Benzo[b]fluoranthene and Chrysene exceeded the RPD limit for the MSD of sample PDI-SC-S032-8to10MSD (580-79329-33) in batch 580-281321.

Benzo[a]anthracene failed the recovery criteria high for the MS of sample PDI-SC-S218-6to8MS (580-79329-37) in batch 580-281430. Sample matrix interference and/or non-homogeneity are suspected.

Several analytes failed the recovery criteria high for the MS of sample PDI-SC-S086-0to2MS (580-79329-7) in batch 580-281139. Several analytes failed the recovery criteria high for the MSD of sample PDI-SC-S086-0to2MSD (580-79329-7) in batch 580-281139. 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.

Benzo[b]fluoranthene and Chrysene exceeded the RPD limit for the MSD of sample PDI-SC-S218-6to8MSD (580-79329-37) in batch 580-282110.

The following samples were diluted due to the nature of the sample matrix: PDI-SC-S144-0to2 (580-79329-1), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6),

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PDI-SC-S086-0to2D (580-79329-8), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), PDI-SC-S178-2to3.7 (580-79329-18), **PDI-SC-S178-3.7to4.7 (580-79329-19),** PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S172-0to2 (580-79329-36), **PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-8to10 (580-79329-38)** and PDI-SC-S228-0to2.3 (580-79329-39). Elevated reporting limits (RLs) are provided.

The following samples were diluted to bring the concentration of target analytes within the calibration range: PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-0to2 MS (580-79329-7 MS), PDI-SC-S086-0to2 MSD (580-79329-7 MSD), PDI-SC-S086-0to2D (580-79329-8), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27) and PDI-SC-S083-5to6.6 (580-79329-28). Elevated reporting limits (RLs) are provided.

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

Samples PDI-RB-SS-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45) and PDI-RB-SS-180802 (580-79329-46) were analyzed for semivolatile organic compounds - Selected Ion Mode (SIM) in accordance with 8270D SIM. The samples were prepared on 08/06/2018 and analyzed on 08/13/2018.

Benzo[b]fluoranthene, Benzo[k]fluoranthene, Chrysene, Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene failed the recovery criteria high for LCSD 580-280882/3-A. Several analytes exceeded the RPD limit. These analytes were biased high in the LCSD; therefore, the data 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-S144-0to2 (580-79329-1), PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-0to2D (580-79329-8), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), PDI-SC-S178-2to3.7 (580-79329-18), PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21), PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-4to6 (580-79329-31), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-10to12 (580-79329-34), PDI-SC-S032-12to14 (580-79329-35), PDI-SC-S172-0to2 (580-79329-36), PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-8to10 (580-79329-38) and PDI-SC-S228-0to2.3 (580-79329-39) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA sw-846 method 8082A. The samples were prepared on 08/08/2018 and 08/09/2018 and analyzed on 08/10/2018, 08/14/2018, 08/16/2018, 08/19/2018, 08/28/2018 and 08/29/2018.

Surrogate recovery for the following samples were outside control limits: PDI-SC-S144-0to2 (580-79329-1), PDI-SC-S144-0to2 MS (580-79329-1 MS), PDI-SC-S144-0to2 MSD (580-79329-1 MSD), PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), PDI-SC-S178-2to3.7 (580-79329-18), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), **PDI-SC-S032-8to10 (580-79329-33[MS]),** PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-6to8 (580-79329-37[MS]), PDI-SC-S218-6to8 (580-79329-37[MSD]), and PDI-SC-S228-0to2.3 (580-79329-39). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis were not performed.

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:

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PDI-SC-S032-2to4 (580-79329-30). The sample has been quantified and reported as Aroclor 1254. Due to the poor match with the Aroclor standard, there is increased qualitative and quantitative uncertainty associated with this result.

The following samples required a copper clean-up to reduce matrix interferences caused by sulfur: PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-8to10 (580-79329-33[MS]), PDI-SC-S032-8to10 (580-79329-33[MSD]), PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-6to8 (580-79329-37[MS]) and PDI-SC-S218-6to8 (580-79329-37[MSD]).

The %RPD between the primary and confirmation column exceeded 40% for 1248 for the following samples: PDI-SC-S218-6to8 (580-79329-37). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: PDI-SC-S144-0to2 (580-79329-1).

The %RPD between the primary and confirmation column exceeded 40% for PCB-1016 and/or PCB-1260 for the following samples: PDI-SC-S086-0to2 (580-79329-7) and PDI-SC-S218-2to4.5 (580-79329-11). The lower ovalue(s) has been reported and qualified in accordance with the laboratory's SOP.

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-S178-4.7to6.7 (580-79329-20). 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.

A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Samples were to be vialed at a 2mL final volume via client request for RL differentiation. The following samples could not be brought down to a final volume of 2mL due to matrix interference: PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S172-0to2 (580-79329-36) and PDI-SC-S228-0to2.3 (580-79329-39).

PCB-1016 and PCB-1260 failed the recovery criteria low for the MS of sample PDI-SC-S144-0to2MS (580-79329-1) in batch 580-281924. PCB-1016 and PCB-1260 failed the recovery criteria low for the MSD of sample PDI-SC-S144-0to2MSD (580-79329-1) in batch 580-281924. PCB-1016 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.

PCB-1016 and PCB-1260 failed the recovery criteria low for the MS of sample PDI-SC-S032-8to10MS (580-79329-33) in batch 580-281266. PCB-1260 failed the recovery criteria low for the MSD of sample PDI-SC-S032-8to10MSD (580-79329-33) in batch 580-281266. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

PCB-1016 failed the recovery criteria low for the MS of sample PDI-SC-S218-6to8MS (580-79329-37) in batch 580-281357. 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 580-281265 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-S178-3.7to4.7 (580-79329-19),** PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21) **and MB 580-281124/1-A.**

The continuing calibration verification (CCV) associated with 580-281265 recovered high and outside the control limits for PCB-1260 on one column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: The following samples are impacted: PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21), MB 580-281124/1-A and LCS 580-281124/2-A.

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The continuing calibration verification (CCV) standard associated with batch 580-281265 recovered 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 samples are impacted: PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21), MB 580-281124/1-A and LCS 580-281124/2-A.

CCB fails surrogate recovery in batch 580-281265. The CCV run before the CCB passes surrogate along with all samples. Due to this and careful consideration, the data is reported. PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20) and PDI-SC-S178-6.7to8.7 (580-79329-21).

The continuing calibration verification (CCV) associated with batch 580-281266 recovered above the upper control limit for PCB-1232 and PCB-1248 for the confirmation column. The samples associated with this CCV were non-detects for the affected analytes on the primary column; therefore, the data have been reported. The following samples are impacted: PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-8to10 (580-79329-33[MS]) and PDI-SC-S032-8to10 (580-79329-33[MSD]).

CCB fails surrogate recovery in batch 580-281266. The CCV run before the CCB passes surrogate. Due to this and after careful consideration, the data is reported. PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-8to10 (580-79329-33[MS]) and PDI-SC-S032-8to10 (580-79329-33[MSD]).

The continuing calibration verification (CCV) associated with batch 580-281357 recovered above the upper control limit for PCB-1242. 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-S218-6to8 (580-79329-37), PDI-SC-S218-6to8 (580-79329-37[MS]), PDI-SC-S218-6to8 (580-79329-37[MSD]) and **MB 580-281230/1-A .**

The continuing calibration verification (CCV) associated with batch 580-281357 recovered above the upper control limit for PCB-1232, PCB-1248, PCB-1242, PCB-1221 and PCB-1254 on the confirmation column. The following samples are impacted: PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-6to8 (580-79329-37[MS]), PDI-SC-S218-6to8 (580-79329-37[MSD]), **MB 580-281230/1-A and LCS 580-281230/2-A**.

The continuing calibration verification (CCV) associated with batch 580-281788 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-S032-4to6 (580-79329-31), PDI-SC-S032-10to12 (580-79329-34), PDI-SC-S032-12to14 (580-79329-35), PDI-SC-S172-0to2 (580-79329-36), PDI-SC-S218-8to10 (580-79329-38), PDI-SC-S228-0to2.3 (580-79329-39) and (CCV 580-281788/2).

The continuing calibration verification (CCV) associated with batch 580-281924 recovered above the upper control limit for PCB-1248 and PCB-1254. 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-S144-0to2 (580-79329-1), MB 580-281111/1-A, PDI-SC-S144-0to2 (580-79329-1[MS]) and PDI-SC-S144-0to2 (580-79329-1[MSD])

The continuing calibration verification (CCV) associated with **580-281924** recovered high and outside the control limits for PCB-1232, PCB-1242, PCB-1221 and PCB-1016 on one column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: **PDI-SC-S144-0to2 (580-79329-1), MB 580-281111/1-A, LCS 580-281111/2-A, PDI-SC-S144-0to2 (580-79329-1[MS]) and PDI-SC-S144-0to2 (580-79329-1[MSD])**

The continuing calibration verification (CCV) standard associated with batch 580-281924 recovered outside acceptance criteria for %D for surrogate Tetrachloro-m-xylene 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 samples are impacted: PDI-SC-S144-0to2 (580-79329-1), MB 580-281111/1-A, LCS 580-281111/2-A, PDI-SC-S144-0to2 (580-79329-1[MS]) and PDI-SC-S144-0to2 (580-79329-1[MSD])

Job ID: 580-79329-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

The continuing calibration verification (CCV) associated with batch 580-282696 recovered above the upper control limit for PCB-1232 and PCB-1221. 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-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), (CCV 580-282696/1) and (CCV 580-282696/4).

The continuing calibration verification (CCV) associated with 580-282696 recovered high and outside the control limits for PCB-1254 on one column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17) and (CCV 580-282696/4).

The continuing calibration verification (CCV) associated with batch 580-282709 recovered above the upper control limit for PCB-123 PCB-1248 and PCB-1221. 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-S086-0to2D (580-79329-8) and PDI-SC-S178-2to3.7 (580-79329-18).

The continuing calibration verification (CCV) associated with 580-282709 recovered high and outside the control limits for PCB-1242 PCB-1254 and PCB-1260 on one column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: PDI-SC-S086-0to2D (580-79329-8) and PDI-SC-S178-2to3.7 (580-79329-18).

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

POLYCHLORINATED BIPHENYLS (PCBS) - RINSE BLANK

Samples PDI-RB-SS-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45) and PDI-RB-SS-180802 (580-79329-46) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 08/07/2018 and analyzed on 08/08/2018.

Surrogate recovery for the following samples were outside control limits: PDI-RB-SS-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45) and PDI-RB-SS-180802 (580-79329-46)

The continuing calibration verification (CCV) associated with batch 580-281188 recovered above the upper control limit for PCB-1242. 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-RB-SS-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45), PDI-RB-SS-180802 (580-79329-46), **MB 580-281027/1-A** and (CCV 580-281188/4).

The continuing calibration verification (CCV) associated with 580-281188 recovered low and outside the control limits for 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-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45), PDI-RB-SS-180802 (580-79329-46), **MB 580-281027/1-A, LCS 580-281027/2-A, LCSD 580-281027/3-A** and (CCVIS 580-281188/6).

The following continuing calibration verification (CCV) standard associated with batch 580-281188 recovered 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 samples are impacted: PDI-RB-SS-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45), PDI-RB-SS-180802 (580-79329-46), **MB 580-281027/1-A, LCS 580-281027/2-A, LCSD 580-281027/3-A** and (CCVIS 580-281188/6).

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-S144-0to2 (580-79329-1), PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8

Job ID: 580-79329-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

(580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-0to2D (580-79329-8), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-2to4D (580-79329-14), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), PDI-SC-S178-2to3.7 (580-79329-18), PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21), PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-4to6 (580-79329-31), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-10to12 (580-79329-34), PDI-SC-S032-12to14 (580-79329-35), PDI-SC-S172-0to2 (580-79329-36), PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-8to10 (580-79329-38) and PDI-SC-S228-0to2.3 (580-79329-39) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 08/13/2018 and 08/15/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 580-281505/3 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Total Organic Carbon - Duplicates was detected in method blank MB 580-281666/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

TOTAL ORGANIC CARBON - RINSE BLANK

Samples PDI-RB-SS-180801 (580-79329-44), PDI-RB-SS-180802-1645 (580-79329-45) and PDI-RB-SS-180802 (580-79329-46) were analyzed for total organic carbon in accordance with SM 5310B. The samples were analyzed on 08/09/2018.

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

GRAIN SIZE

Samples PDI-SC-S144-0to2 (580-79329-1), PDI-SC-S144-2to4 (580-79329-2), PDI-SC-S144-4to6 (580-79329-3), PDI-SC-S144-6to8 (580-79329-4), PDI-SC-S144-8to10 (580-79329-5), PDI-SC-S144-10to12.1 (580-79329-6), PDI-SC-S086-0to2 (580-79329-7), PDI-SC-S086-2to3.3 (580-79329-9), PDI-SC-S218-0to2 (580-79329-10), PDI-SC-S218-2to4.5 (580-79329-11), PDI-SC-S218-4.5to6 (580-79329-12), PDI-SC-S172-2to4 (580-79329-13), PDI-SC-S172-4to6 (580-79329-15), PDI-SC-S172-6to8.1 (580-79329-16), PDI-SC-S178-0to2 (580-79329-17), PDI-SC-S178-2to3.7 (580-79329-18), PDI-SC-S178-3.7to4.7 (580-79329-19), PDI-SC-S178-4.7to6.7 (580-79329-20), PDI-SC-S178-6.7to8.7 (580-79329-21), PDI-SC-S178-8.7to10.7 (580-79329-22), PDI-SC-S178-10.7to12.7 (580-79329-23), PDI-SC-S178-12.7to14 (580-79329-24), PDI-SC-S083-0to1.6 (580-79329-25), PDI-SC-S083-1.6to3.5 (580-79329-26), PDI-SC-S083-3.5to5.0 (580-79329-27), PDI-SC-S083-5to6.6 (580-79329-28), PDI-SC-S032-0to2 (580-79329-29), PDI-SC-S032-2to4 (580-79329-30), PDI-SC-S032-4to6 (580-79329-31), PDI-SC-S032-6to8 (580-79329-32), PDI-SC-S032-8to10 (580-79329-33), PDI-SC-S032-10to12 (580-79329-34), PDI-SC-S032-12to14 (580-79329-35), PDI-SC-S172-0to2 (580-79329-36), PDI-SC-S218-6to8 (580-79329-37), PDI-SC-S218-8to10 (580-79329-38) and PDI-SC-S228-0to2.3 (580-79329-39) were analyzed for grain size in accordance with ASTM D7928/D6913. The samples were analyzed on 08/07/2018, 08/08/2018 and 08/09/2018.

Fine Sand exceeded the RPD limit for the duplicate of sample PDI-SC-S144-0to2DU (580-79329-1).

Coarse Sand, Gravel and Medium Sand exceeded the RPD limit for the duplicate of sample PDI-SC-S178-4.

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.
F2	MS/MSD RPD exceeds control limits
*	LCS or LCSD is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
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.
E	Result exceeded calibration range.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H	Sample was prepped or analyzed beyond the specified holding time

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: PDI-SC-S144-0to2

Date Collected: 08/01/18 11:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-1

Matrix: Solid
Percent Solids: 47.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	53	B	16	1.5	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Acenaphthene	58		16	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Acenaphthylene	32		16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Anthracene	98		16	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Benzo[a]anthracene	170	B	16	2.5	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Benzo[a]pyrene	110	B	16	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Benzo[b]fluoranthene	240	B	16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Benzo[g,h,i]perylene	95	B	16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Benzo[k]fluoranthene	64	B	16	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Chrysene	240	B	16	4.9	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Dibenz(a,h)anthracene	19	B	16	2.4	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Fluoranthene	440	B	16	4.6	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Fluorene	54		16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Indeno[1,2,3-cd]pyrene	74	B	16	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Naphthalene	140	B	16	2.6	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Phenanthrene	170	B	16	2.3	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10
Pyrene	460	B	16	3.2	ug/Kg	☼	08/06/18 17:18	08/08/18 12:57	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*101*		*57 - 120*	*08/06/18 17:18*	*08/08/18 12:57*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1 F2	4.2	0.71	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1
PCB-1221	ND		4.2	2.0	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1
PCB-1232	ND		4.2	0.98	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1
PCB-1242	ND		4.2	1.0	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1
PCB-1248	ND		4.2	0.33	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1
PCB-1254	ND		4.2	1.6	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1
PCB-1260	4.8	F1	4.2	0.71	ug/Kg	☼	08/08/18 09:42	08/19/18 05:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*50*	*X*	*54 - 142*	*08/08/18 09:42*	*08/19/18 05:40*	*1*
Tetrachloro-m-xylene	*56*	*X*	*58 - 122*	*08/08/18 09:42*	*08/19/18 05:40*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	32000	B	2000	44	mg/Kg			08/13/18 16:53	1
Total Solids	47.5		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	49		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.1				%			08/07/18 14:21	1
Fine Sand	8.9				%			08/07/18 14:21	1
Silt	73.6				%			08/07/18 14:21	1
Clay	17.3				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S144-2to4

Date Collected: 08/01/18 11:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-2

Matrix: Solid
Percent Solids: 54.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1400	B	14	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Acenaphthene	9900		14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Acenaphthylene	120		14	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Anthracene	3100		14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Benzo[a]anthracene	2600	B	14	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Benzo[a]pyrene	730	B	14	1.2	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Benzo[b]fluoranthene	1400	B	14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Benzo[g,h,i]perylene	300	B	14	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Benzo[k]fluoranthene	440	B	14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Chrysene	2200	B	14	4.3	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Dibenz(a,h)anthracene	96	B	14	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Fluoranthene	12000	B	14	4.0	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Fluorene	7500		14	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Indeno[1,2,3-cd]pyrene	290	B	14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Naphthalene	1700	B	14	2.3	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10
Pyrene	8800	B	14	2.8	ug/Kg	☼	08/06/18 17:18	08/08/18 13:23	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*101*		*57 - 120*	*08/06/18 17:18*	*08/08/18 13:23*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	17000	B	140	20	ug/Kg	☼	08/06/18 17:18	08/09/18 14:17	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.6	0.60	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1
PCB-1221	ND		3.6	1.7	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1
PCB-1232	ND		3.6	0.84	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1
PCB-1242	ND		3.6	0.87	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1
PCB-1248	ND		3.6	0.28	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1
PCB-1254	ND		3.6	1.4	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1
PCB-1260	38		3.6	0.60	ug/Kg	☼	08/08/18 09:42	08/28/18 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*61*		*54 - 142*	*08/08/18 09:42*	*08/28/18 20:30*	*1*
Tetrachloro-m-xylene	*51*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 20:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	39000	B	2000	44	mg/Kg			08/13/18 16:59	1
Total Solids	54.4		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	58		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.1				%			08/07/18 14:21	1
Medium Sand	0.2				%			08/07/18 14:21	1
Fine Sand	12.3				%			08/07/18 14:21	1
Silt	68.7				%			08/07/18 14:21	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S144-2to4
Date Collected: 08/01/18 11:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-2
Matrix: Solid
Percent Solids: 54.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	18.7				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S144-4to6

Date Collected: 08/01/18 12:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-3

Matrix: Solid
Percent Solids: 57.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	3600	B	17	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Acenaphthene	12000		17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Acenaphthylene	150		17	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Anthracene	2600		17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Benzo[a]anthracene	1700	B	17	2.6	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Benzo[a]pyrene	430	B	17	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Benzo[b]fluoranthene	810	B	17	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Benzo[g,h,i]perylene	240	B	17	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Benzo[k]fluoranthene	240	B	17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Chrysene	1400	B	17	5.2	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Dibenz(a,h)anthracene	52	B	17	2.5	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Fluoranthene	10000	B	17	4.8	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Fluorene	8400		17	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Indeno[1,2,3-cd]pyrene	200	B	17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Naphthalene	3900	B	17	2.8	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10
Pyrene	6500	B	17	3.3	ug/Kg	☼	08/06/18 17:18	08/08/18 13:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*93*		*57 - 120*	*08/06/18 17:18*	*08/08/18 13:49*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	110000	B	170	24	ug/Kg	☼	08/06/18 17:18	08/09/18 14:43	100

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	☼	08/08/18 09:42	08/28/18 20:48	1
PCB-1221	ND		3.5	1.6	ug/Kg	☼	08/08/18 09:42	08/28/18 20:48	1
PCB-1232	ND		3.5	0.81	ug/Kg	☼	08/08/18 09:42	08/28/18 20:48	1
PCB-1242	ND		3.5	0.85	ug/Kg	☼	08/08/18 09:42	08/28/18 20:48	1
PCB-1248	ND		3.5	0.28	ug/Kg	☼	08/08/18 09:42	08/28/18 20:48	1
PCB-1254	ND		3.5	1.4	ug/Kg	☼	08/08/18 09:42	08/28/18 20:48	1
PCB-1260	38		3.5	0.59	ug/Kg	☼	08/08/18 09:42	08/28/18 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*135*		*54 - 142*	*08/08/18 09:42*	*08/28/18 20:48*	*1*
Tetrachloro-m-xylene	*39*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 20:48*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	33000	B	2000	44	mg/Kg			08/13/18 17:05	1
Total Solids	57.0		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	59		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.1				%			08/07/18 14:21	1
Medium Sand	0.1				%			08/07/18 14:21	1
Fine Sand	11.4				%			08/07/18 14:21	1
Silt	68.7				%			08/07/18 14:21	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S144-4to6
Date Collected: 08/01/18 12:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-3
Matrix: Solid
Percent Solids: 57.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	19.7				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S144-6to8

Date Collected: 08/01/18 12:05
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-4

Matrix: Solid
Percent Solids: 59.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1300	B	14	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Acenaphthene	1800		14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Acenaphthylene	130		14	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Anthracene	660		14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Benzo[a]anthracene	560	B	14	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Benzo[a]pyrene	350	B	14	1.1	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Benzo[b]fluoranthene	490	B	14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Benzo[g,h,i]perylene	370	B	14	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Benzo[k]fluoranthene	160	B	14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Chrysene	590	B	14	4.2	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Dibenz(a,h)anthracene	43	B	14	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Fluoranthene	2400	B	14	3.9	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Fluorene	1100		14	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Indeno[1,2,3-cd]pyrene	240	B	14	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Naphthalene	4200	B	14	2.3	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Phenanthrene	3100	B	14	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10
Pyrene	2200	B	14	2.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:15	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*101*		*57 - 120*	*08/06/18 17:18*	*08/08/18 14:15*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.2	0.55	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1
PCB-1221	ND		3.2	1.5	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1
PCB-1232	ND		3.2	0.76	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1
PCB-1242	ND		3.2	0.79	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1
PCB-1248	ND		3.2	0.26	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1
PCB-1254	ND		3.2	1.3	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1
PCB-1260	25		3.2	0.55	ug/Kg	☼	08/08/18 09:42	08/28/18 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*79*		*54 - 142*	*08/08/18 09:42*	*08/28/18 21:05*	*1*
Tetrachloro-m-xylene	*57*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 21:05*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	37000	B	2000	44	mg/Kg			08/13/18 17:11	1
Total Solids	59.1		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	63		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.1				%			08/07/18 14:21	1
Medium Sand	0.2				%			08/07/18 14:21	1
Fine Sand	15.6				%			08/07/18 14:21	1
Silt	64.6				%			08/07/18 14:21	1
Clay	19.4				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S144-8to10

Date Collected: 08/01/18 12:10
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-5

Matrix: Solid
Percent Solids: 61.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	95	B	15	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Acenaphthene	79		15	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Acenaphthylene	200		15	1.5	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Anthracene	110		15	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Benzo[a]anthracene	130	B	15	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Benzo[a]pyrene	120	B	15	1.2	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Benzo[b]fluoranthene	150	B	15	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Benzo[g,h,i]perylene	140	B	15	1.5	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Benzo[k]fluoranthene	46	B	15	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Chrysene	180	B	15	4.4	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Dibenz(a,h)anthracene	17	B	15	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Fluoranthene	520	B	15	4.1	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Fluorene	88		15	1.5	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Indeno[1,2,3-cd]pyrene	110	B	15	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Naphthalene	610	B	15	2.3	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Phenanthrene	520	B	15	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10
Pyrene	700	B	15	2.8	ug/Kg	☼	08/06/18 17:18	08/08/18 14:41	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*90*		*57 - 120*	*08/06/18 17:18*	*08/08/18 14:41*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.1	0.53	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1
PCB-1221	ND		3.1	1.5	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1
PCB-1232	ND		3.1	0.73	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1
PCB-1242	ND		3.1	0.77	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1
PCB-1248	ND		3.1	0.25	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1
PCB-1254	ND		3.1	1.2	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1
PCB-1260	ND		3.1	0.53	ug/Kg	☼	08/08/18 09:42	08/28/18 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*	*X*	*54 - 142*	*08/08/18 09:42*	*08/28/18 21:23*	*1*
Tetrachloro-m-xylene	*38*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 21:23*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	35000	B	2000	44	mg/Kg			08/13/18 17:17	1
Total Solids	61.7		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	62		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.2				%			08/07/18 14:21	1
Fine Sand	15.2				%			08/07/18 14:21	1
Silt	66.9				%			08/07/18 14:21	1
Clay	17.6				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S144-10to12.1

Lab Sample ID: 580-79329-6
Date Collected: 08/01/18 12:15
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 62.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	59	B	13	1.2	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Acenaphthene	90		13	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Acenaphthylene	130		13	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Anthracene	100		13	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Benzo[a]anthracene	120	B	13	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Benzo[a]pyrene	110	B	13	1.1	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Benzo[b]fluoranthene	120	B	13	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Benzo[g,h,i]perylene	150	B	13	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Benzo[k]fluoranthene	37	B	13	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Chrysene	150	B	13	3.9	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Dibenz(a,h)anthracene	13	B	13	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Fluoranthene	400	B	13	3.7	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Fluorene	72		13	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Indeno[1,2,3-cd]pyrene	110	B	13	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Naphthalene	340	B	13	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Phenanthrene	400	B	13	1.8	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10
Pyrene	510	B	13	2.5	ug/Kg	☼	08/06/18 17:18	08/08/18 15:08	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*99*		*57 - 120*	*08/06/18 17:18*	*08/08/18 15:08*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.1	0.53	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1
PCB-1221	ND		3.1	1.5	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1
PCB-1232	ND		3.1	0.74	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1
PCB-1242	ND		3.1	0.77	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1
PCB-1248	ND		3.1	0.25	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1
PCB-1254	ND		3.1	1.2	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1
PCB-1260	ND		3.1	0.53	ug/Kg	☼	08/08/18 09:42	08/28/18 21:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*56*		*54 - 142*	*08/08/18 09:42*	*08/28/18 21:41*	*1*
Tetrachloro-m-xylene	*49*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 21:41*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	30000		2000	44	mg/Kg			08/15/18 09:08	1
Total Solids	62.3		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	66		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.3				%			08/07/18 14:21	1
Fine Sand	34.2				%			08/07/18 14:21	1
Silt	50.7				%			08/07/18 14:21	1
Clay	14.7				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S086-0to2

Date Collected: 08/02/18 09:20
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-7

Matrix: Solid
Percent Solids: 78.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	280	F2 F1 B	61	5.5	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Acenaphthene	8800	F2	61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Acenaphthylene	1800	F2	61	6.1	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Anthracene	10000	F2	61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Benzo[a]anthracene	11000	F2 B	61	9.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Benzo[a]pyrene	12000	F2 B	61	4.9	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Benzo[b]fluoranthene	12000	F2 B	61	7.2	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Benzo[g,h,i]perylene	11000	F2 B	61	6.1	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Benzo[k]fluoranthene	3000	F2 B	61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Chrysene	12000	F2 B	61	18	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Dibenz(a,h)anthracene	1300	F2 B	61	8.8	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Fluoranthene	37000	F2 B	61	17	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Fluorene	5000	F2	61	6.1	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Indeno[1,2,3-cd]pyrene	9200	F2 B	61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Naphthalene	420	F2 F1 B	61	9.8	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Phenanthrene	39000	F2 B	61	8.4	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50
Pyrene	46000	F2 B	61	12	ug/Kg	☼	08/06/18 17:18	08/08/18 15:34	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*57 - 120*	*08/06/18 17:18*	*08/08/18 15:34*	*50*

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	☼	08/08/18 09:42	08/28/18 21:59	1
PCB-1221	ND		2.5	1.2	ug/Kg	☼	08/08/18 09:42	08/28/18 21:59	1
PCB-1232	ND		2.5	0.58	ug/Kg	☼	08/08/18 09:42	08/28/18 21:59	1
PCB-1242	ND		2.5	0.61	ug/Kg	☼	08/08/18 09:42	08/28/18 21:59	1
PCB-1248	ND		2.5	0.20	ug/Kg	☼	08/08/18 09:42	08/28/18 21:59	1
PCB-1254	ND		2.5	0.98	ug/Kg	☼	08/08/18 09:42	08/28/18 21:59	1
PCB-1260	3.6		2.5	0.42	ug/Kg	☼	08/08/18 09:42	08/28/18 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*64*		*54 - 142*	*08/08/18 09:42*	*08/28/18 21:59*	*1*
Tetrachloro-m-xylene	*36*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 21:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	12000	B	2000	44	mg/Kg			08/15/18 12:40	1
Total Solids	78.4		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	82		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	7.5				%			08/07/18 14:21	1
Coarse Sand	1.5				%			08/07/18 14:21	1
Medium Sand	26.9				%			08/07/18 14:21	1
Fine Sand	55.5				%			08/07/18 14:21	1
Silt	8.6				%			08/07/18 14:21	1
Clay	0.0				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S086-0to2D

Date Collected: 08/02/18 09:20
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-8

Matrix: Solid
Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1700	B	51	4.6	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50
Acenaphthylene	9300		51	5.1	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50
Benzo[k]fluoranthene	18000	B	51	6.2	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50
Dibenz(a,h)anthracene	9600	B	51	7.4	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50
Fluorene	39000		51	5.1	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50
Indeno[1,2,3-cd]pyrene	51000	B	51	6.2	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50
Naphthalene	3500	B	51	8.2	ug/Kg	☼	08/06/18 17:18	08/08/18 16:53	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*115*		*57 - 120*	*08/06/18 17:18*	*08/08/18 16:53*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	12000		510	62	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Anthracene	14000		510	62	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Benzo[a]anthracene	11000	B	510	78	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Benzo[a]pyrene	13000	B	510	41	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Benzo[b]fluoranthene	13000	B	510	61	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Benzo[g,h,i]perylene	12000	B	510	51	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Chrysene	13000	B	510	150	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Fluoranthene	40000	B	510	140	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Phenanthrene	52000	B	510	71	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500
Pyrene	51000	B	510	100	ug/Kg	☼	08/06/18 17:18	08/09/18 15:09	500

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	☼	08/08/18 09:42	08/29/18 11:50	1
PCB-1221	ND		2.5	1.2	ug/Kg	☼	08/08/18 09:42	08/29/18 11:50	1
PCB-1232	ND		2.5	0.58	ug/Kg	☼	08/08/18 09:42	08/29/18 11:50	1
PCB-1242	ND		2.5	0.61	ug/Kg	☼	08/08/18 09:42	08/29/18 11:50	1
PCB-1248	ND		2.5	0.20	ug/Kg	☼	08/08/18 09:42	08/29/18 11:50	1
PCB-1254	ND		2.5	0.98	ug/Kg	☼	08/08/18 09:42	08/29/18 11:50	1
PCB-1260	4.4		2.5	0.42	ug/Kg	☼	08/08/18 09:42	08/29/18 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*54 - 142*	*08/08/18 09:42*	*08/29/18 11:50*	*1*
Tetrachloro-m-xylene	*58*		*58 - 122*	*08/08/18 09:42*	*08/29/18 11:50*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	6700	B	2000	44	mg/Kg			08/15/18 12:46	1
Total Solids	80.3		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	78	H	0.10	0.10	%			08/30/18 16:04	1

Client Sample ID: PDI-SC-S086-2to3.3

Date Collected: 08/02/18 09:25
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-9

Matrix: Solid
Percent Solids: 76.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	2400	B	61	5.4	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Acenaphthene	13000		61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Acenaphthylene	2000		61	6.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Anthracene	13000		61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Benzo[a]anthracene	14000	B	61	9.2	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Benzo[a]pyrene	15000	B	61	4.8	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Benzo[b]fluoranthene	15000	B	61	7.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Benzo[g,h,i]perylene	14000	B	61	6.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Benzo[k]fluoranthene	3800	B	61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Chrysene	14000	B	61	18	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Dibenz(a,h)anthracene	1700	B	61	8.7	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Fluoranthene	47000	B	61	17	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Fluorene	7900		61	6.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Indeno[1,2,3-cd]pyrene	12000	B	61	7.3	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Naphthalene	870	B	61	9.7	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50
Pyrene	58000	B	61	12	ug/Kg	☼	08/06/18 17:18	08/08/18 17:19	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*102*		*57 - 120*	*08/06/18 17:18*	*08/08/18 17:19*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	74000	B	610	84	ug/Kg	☼	08/06/18 17:18	08/09/18 15:36	500

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.6	0.43	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1
PCB-1221	ND		2.6	1.2	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1
PCB-1232	ND		2.6	0.60	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1
PCB-1242	ND		2.6	0.63	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1
PCB-1248	ND		2.6	0.20	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1
PCB-1254	ND		2.6	1.0	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1
PCB-1260	2.2	J	2.6	0.43	ug/Kg	☼	08/08/18 09:42	08/28/18 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*63*		*54 - 142*	*08/08/18 09:42*	*08/28/18 22:16*	*1*
Tetrachloro-m-xylene	*50*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 22:16*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	3600	B	2000	44	mg/Kg			08/15/18 12:58	1
Total Solids	76.7		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	83		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	4.6				%			08/07/18 14:21	1
Coarse Sand	0.4				%			08/07/18 14:21	1
Medium Sand	15.9				%			08/07/18 14:21	1
Fine Sand	72.2				%			08/07/18 14:21	1
Silt	6.9				%			08/07/18 14:21	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S086-2to3.3
Date Collected: 08/02/18 09:25
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-9
Matrix: Solid
Percent Solids: 76.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	0.0				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S218-0to2

Date Collected: 08/02/18 11:20
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-10

Matrix: Solid
Percent Solids: 56.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	57	B	17	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Acenaphthene	44		17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Acenaphthylene	43		17	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Anthracene	68		17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Benzo[a]anthracene	180	B	17	2.6	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Benzo[a]pyrene	140	B	17	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Benzo[b]fluoranthene	200	B	17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Benzo[g,h,i]perylene	150	B	17	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Benzo[k]fluoranthene	59	B	17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Chrysene	210	B	17	5.2	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Dibenz(a,h)anthracene	29	B	17	2.5	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Fluoranthene	360	B	17	4.9	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Fluorene	41		17	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Indeno[1,2,3-cd]pyrene	140	B	17	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Naphthalene	100	B	17	2.8	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Phenanthrene	300	B	17	2.4	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10
Pyrene	440	B	17	3.4	ug/Kg	☼	08/06/18 17:18	08/08/18 17:46	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*57 - 120*	*08/06/18 17:18*	*08/08/18 17:46*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	36		3.5	0.59	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1
PCB-1221	ND		3.5	1.6	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1
PCB-1232	ND		3.5	0.81	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1
PCB-1242	ND		3.5	0.85	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1
PCB-1248	ND		3.5	0.28	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1
PCB-1254	ND		3.5	1.4	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1
PCB-1260	11		3.5	0.59	ug/Kg	☼	08/08/18 09:42	08/28/18 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*60*		*54 - 142*	*08/08/18 09:42*	*08/28/18 22:34*	*1*
Tetrachloro-m-xylene	*47*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 22:34*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	29000	B	2000	44	mg/Kg			08/15/18 13:03	1
Total Solids	56.1		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	60		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.2				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.5				%			08/07/18 14:21	1
Fine Sand	31.7				%			08/07/18 14:21	1
Silt	58.6				%			08/07/18 14:21	1
Clay	9.0				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S218-2to4.5

Date Collected: 08/02/18 11:25
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-11

Matrix: Solid
Percent Solids: 61.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	98	B	16	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Acenaphthene	60		16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Acenaphthylene	68		16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Anthracene	130		16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Benzo[a]anthracene	310	B	16	2.4	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Benzo[a]pyrene	210	B	16	1.2	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Benzo[b]fluoranthene	320	B	16	1.8	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Benzo[g,h,i]perylene	210	B	16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Benzo[k]fluoranthene	100	B	16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Chrysene	370	B	16	4.7	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Dibenz(a,h)anthracene	38	B	16	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Fluoranthene	550	B	16	4.3	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Fluorene	55		16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Indeno[1,2,3-cd]pyrene	160	B	16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Naphthalene	160	B	16	2.5	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Phenanthrene	510	B	16	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10
Pyrene	810	B	16	3.0	ug/Kg	☼	08/06/18 17:18	08/08/18 18:12	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*95*		*57 - 120*	*08/06/18 17:18*	*08/08/18 18:12*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	45		3.2	0.54	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1
PCB-1221	ND		3.2	1.5	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1
PCB-1232	ND		3.2	0.75	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1
PCB-1242	ND		3.2	0.78	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1
PCB-1248	ND		3.2	0.25	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1
PCB-1254	ND		3.2	1.3	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1
PCB-1260	31		3.2	0.54	ug/Kg	☼	08/08/18 09:42	08/28/18 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*82*		*54 - 142*	*08/08/18 09:42*	*08/28/18 22:52*	*1*
Tetrachloro-m-xylene	*40*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 22:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	28000	B	2000	44	mg/Kg			08/15/18 13:09	1
Total Solids	61.9		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	65		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.9				%			08/07/18 14:21	1
Fine Sand	31.9				%			08/07/18 14:21	1
Silt	56.7				%			08/07/18 14:21	1
Clay	10.5				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S218-4.5to6

Date Collected: 08/02/18 11:30
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-12

Matrix: Solid
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.9	B	1.1	0.10	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Acenaphthene	1.1		1.1	0.13	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Acenaphthylene	1.9		1.1	0.11	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Anthracene	2.0		1.1	0.13	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Benzo[a]anthracene	6.7	B	1.1	0.17	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Benzo[a]pyrene	3.8	B	1.1	0.090	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Benzo[b]fluoranthene	5.2	B	1.1	0.13	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Benzo[g,h,i]perylene	5.0	B	1.1	0.11	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Benzo[k]fluoranthene	1.7	B	1.1	0.13	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Chrysene	6.2	B	1.1	0.34	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Dibenz(a,h)anthracene	0.56	J B	1.1	0.16	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Fluoranthene	6.9	B	1.1	0.31	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Fluorene	1.0	J	1.1	0.11	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Indeno[1,2,3-cd]pyrene	3.2	B	1.1	0.13	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Naphthalene	2.9	B	1.1	0.18	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Phenanthrene	8.2	B	1.1	0.15	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1
Pyrene	16	B	1.1	0.22	ug/Kg	☼	08/06/18 17:18	08/08/18 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*95*		*57 - 120*	*08/06/18 17:18*	*08/08/18 18:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	2.0	J	2.2	0.37	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1
PCB-1221	ND		2.2	1.0	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1
PCB-1232	ND		2.2	0.51	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1
PCB-1242	ND		2.2	0.54	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1
PCB-1248	ND		2.2	0.17	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1
PCB-1254	ND		2.2	0.86	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1
PCB-1260	1.2	J	2.2	0.37	ug/Kg	☼	08/08/18 09:42	08/28/18 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*77*		*54 - 142*	*08/08/18 09:42*	*08/28/18 23:10*	*1*
Tetrachloro-m-xylene	*38*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 23:10*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	770	J B	2000	44	mg/Kg			08/15/18 13:15	1
Total Solids	88.7		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	91		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.1				%			08/07/18 14:21	1
Medium Sand	9.9				%			08/07/18 14:21	1
Fine Sand	77.9				%			08/07/18 14:21	1
Silt	10.7				%			08/07/18 14:21	1
Clay	1.5				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S172-2to4

Date Collected: 08/02/18 17:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-13

Matrix: Solid
Percent Solids: 52.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	110	B	79	7.1	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Acenaphthene	130		79	9.5	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Acenaphthylene	180		79	7.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Anthracene	290		79	9.5	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Benzo[a]anthracene	1000	B	79	12	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Benzo[a]pyrene	750	B	79	6.3	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Benzo[b]fluoranthene	890	B	79	9.3	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Benzo[g,h,i]perylene	470	B	79	7.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Benzo[k]fluoranthene	280	B	79	9.5	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Chrysene	980	B	79	24	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Dibenz(a,h)anthracene	110	B	79	11	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Fluoranthene	1600	B	79	22	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Fluorene	120		79	7.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Indeno[1,2,3-cd]pyrene	450	B	79	9.5	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Naphthalene	310	B	79	13	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Phenanthrene	900	B	79	11	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50
Pyrene	2200	B	79	15	ug/Kg	☼	08/06/18 17:18	08/08/18 19:05	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*99*		*57 - 120*	*08/06/18 17:18*	*08/08/18 19:05*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		3.7	0.63	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1
PCB-1221	ND		3.7	1.8	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1
PCB-1232	ND		3.7	0.87	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1
PCB-1242	ND		3.7	0.91	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1
PCB-1248	ND		3.7	0.30	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1
PCB-1254	160		3.7	1.5	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1
PCB-1260	ND		3.7	0.63	ug/Kg	☼	08/08/18 09:42	08/28/18 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*54 - 142*	*08/08/18 09:42*	*08/28/18 23:27*	*1*
Tetrachloro-m-xylene	*51*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 23:27*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	35000	B	2000	44	mg/Kg			08/15/18 13:20	1
Total Solids	52.6		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	54		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.3				%			08/07/18 14:21	1
Medium Sand	0.5				%			08/07/18 14:21	1
Fine Sand	23.6				%			08/07/18 14:21	1
Silt	55.9				%			08/07/18 14:21	1
Clay	19.7				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S172-2to4D

Date Collected: 08/02/18 17:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-14

Matrix: Solid
Percent Solids: 51.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	130	B	82	7.4	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Acenaphthene	110		82	9.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Acenaphthylene	110		82	8.2	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Anthracene	200		82	9.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Benzo[a]anthracene	320	B	82	13	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Benzo[a]pyrene	240	B	82	6.6	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Benzo[b]fluoranthene	340	B	82	9.7	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Benzo[g,h,i]perylene	250	B	82	8.2	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Benzo[k]fluoranthene	110	B	82	9.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Chrysene	380	B	82	25	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Dibenz(a,h)anthracene	38	J B	82	12	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Fluoranthene	830	B	82	23	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Fluorene	110		82	8.2	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Indeno[1,2,3-cd]pyrene	220	B	82	9.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Naphthalene	440	B	82	13	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Phenanthrene	710	B	82	11	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50
Pyrene	970	B	82	16	ug/Kg	☼	08/06/18 17:18	08/08/18 19:31	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*93*		*57 - 120*	*08/06/18 17:18*	*08/08/18 19:31*	*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	0.65	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1
PCB-1221	ND		3.8	1.8	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1
PCB-1232	ND		3.8	0.89	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1
PCB-1242	ND		3.8	0.93	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1
PCB-1248	ND		3.8	0.30	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1
PCB-1254	140		3.8	1.5	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1
PCB-1260	ND		3.8	0.65	ug/Kg	☼	08/08/18 09:42	08/28/18 23:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*41*	*X*	*54 - 142*	*08/08/18 09:42*	*08/28/18 23:45*	*1*
Tetrachloro-m-xylene	*41*	*X*	*58 - 122*	*08/08/18 09:42*	*08/28/18 23:45*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	38000	B	2000	44	mg/Kg			08/15/18 13:26	1
Total Solids	51.7		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	50	H	0.10	0.10	%			08/30/18 16:04	1

Client Sample ID: PDI-SC-S172-4to6

Date Collected: 08/02/18 18:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-15

Matrix: Solid
Percent Solids: 68.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	190	B	6.8	0.61	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Acenaphthene	210		6.8	0.82	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Acenaphthylene	140		6.8	0.68	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Anthracene	270		6.8	0.82	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Benzo[a]anthracene	450	B	6.8	1.0	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Benzo[a]pyrene	360	B	6.8	0.54	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Benzo[b]fluoranthene	400	B	6.8	0.80	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Benzo[g,h,i]perylene	250	B	6.8	0.68	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Benzo[k]fluoranthene	120	B	6.8	0.82	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Chrysene	400	B	6.8	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Dibenz(a,h)anthracene	52	B	6.8	0.98	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Fluoranthene	1000	B	6.8	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Fluorene	140		6.8	0.68	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Indeno[1,2,3-cd]pyrene	220	B	6.8	0.82	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Naphthalene	620	B	6.8	1.1	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Phenanthrene	880	B	6.8	0.94	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5
Pyrene	1400	B	6.8	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 19:57	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*91*		*57 - 120*	*08/06/18 17:18*	*08/08/18 19:57*	*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	☼	08/08/18 09:42	08/29/18 00:03	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	08/08/18 09:42	08/29/18 00:03	1
PCB-1232	ND		2.8	0.66	ug/Kg	☼	08/08/18 09:42	08/29/18 00:03	1
PCB-1242	ND		2.8	0.69	ug/Kg	☼	08/08/18 09:42	08/29/18 00:03	1
PCB-1248	ND		2.8	0.23	ug/Kg	☼	08/08/18 09:42	08/29/18 00:03	1
PCB-1254	29		2.8	1.1	ug/Kg	☼	08/08/18 09:42	08/29/18 00:03	1
PCB-1260	ND		2.8	0.48	ug/Kg	☼	08/08/18 09:42	08/29/18 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*64*		*54 - 142*	*08/08/18 09:42*	*08/29/18 00:03*	*1*
Tetrachloro-m-xylene	*47*	*X*	*58 - 122*	*08/08/18 09:42*	*08/29/18 00:03*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	24000	B	2000	44	mg/Kg			08/15/18 13:32	1
Total Solids	68.9		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	72		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.2				%			08/07/18 14:21	1
Coarse Sand	0.1				%			08/07/18 14:21	1
Medium Sand	6.7				%			08/07/18 14:21	1
Fine Sand	64.7				%			08/07/18 14:21	1
Silt	24.6				%			08/07/18 14:21	1
Clay	3.7				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S172-6to8.1

Date Collected: 08/02/18 18:05
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-16

Matrix: Solid
Percent Solids: 67.9

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	☼	08/06/18 17:18	08/08/18 20:23	5
Acenaphthene	250		6.8	0.81	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Acenaphthylene	130		6.8	0.68	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Anthracene	270		6.8	0.81	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Benzo[a]anthracene	400	B	6.8	1.0	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Benzo[a]pyrene	410	B	6.8	0.54	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Benzo[b]fluoranthene	440	B	6.8	0.80	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Benzo[g,h,i]perylene	390	B	6.8	0.68	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Benzo[k]fluoranthene	120	B	6.8	0.81	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Chrysene	380	B	6.8	2.0	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Dibenz(a,h)anthracene	43	B	6.8	0.97	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Fluoranthene	1400	B	6.8	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Fluorene	140		6.8	0.68	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Indeno[1,2,3-cd]pyrene	310	B	6.8	0.81	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Naphthalene	550	B	6.8	1.1	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Phenanthrene	1200	B	6.8	0.93	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5
Pyrene	1800	B	6.8	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 20:23	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*88*		*57 - 120*	*08/06/18 17:18*	*08/08/18 20:23*	*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	☼	08/08/18 09:42	08/29/18 00:20	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	08/08/18 09:42	08/29/18 00:20	1
PCB-1232	ND		2.9	0.68	ug/Kg	☼	08/08/18 09:42	08/29/18 00:20	1
PCB-1242	ND		2.9	0.70	ug/Kg	☼	08/08/18 09:42	08/29/18 00:20	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	08/08/18 09:42	08/29/18 00:20	1
PCB-1254	ND		2.9	1.1	ug/Kg	☼	08/08/18 09:42	08/29/18 00:20	1
PCB-1260	7.7		2.9	0.49	ug/Kg	☼	08/08/18 09:42	08/29/18 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*		*54 - 142*	*08/08/18 09:42*	*08/29/18 00:20*	*1*
Tetrachloro-m-xylene	*40*	*X*	*58 - 122*	*08/08/18 09:42*	*08/29/18 00:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	23000	B	2000	44	mg/Kg			08/15/18 13:38	1
Total Solids	67.9		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	72		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.9				%			08/07/18 14:21	1
Coarse Sand	0.8				%			08/07/18 14:21	1
Medium Sand	10.9				%			08/07/18 14:21	1
Fine Sand	40.9				%			08/07/18 14:21	1
Silt	37.0				%			08/07/18 14:21	1
Clay	9.5				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S178-0to2

Date Collected: 08/02/18 15:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-17

Matrix: Solid
Percent Solids: 48.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	82	B	19	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Acenaphthene	130		19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Acenaphthylene	64		19	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Anthracene	180		19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Benzo[a]anthracene	460	B	19	2.8	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Benzo[a]pyrene	350	B	19	1.5	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Benzo[b]fluoranthene	520	B	19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Benzo[g,h,i]perylene	320	B	19	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Benzo[k]fluoranthene	150	B	19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Chrysene	490	B	19	5.6	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Dibenz(a,h)anthracene	77	B	19	2.7	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Fluoranthene	960	B	19	5.2	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Fluorene	120		19	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Indeno[1,2,3-cd]pyrene	280	B	19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Naphthalene	140	B	19	3.0	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Phenanthrene	910	B	19	2.6	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10
Pyrene	1100	B	19	3.6	ug/Kg	☼	08/06/18 17:18	08/08/18 20:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*97*		*57 - 120*	*08/06/18 17:18*	*08/08/18 20:49*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		4.0	0.68	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1
PCB-1221	ND		4.0	1.9	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1
PCB-1232	ND		4.0	0.95	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1
PCB-1242	ND		4.0	0.99	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1
PCB-1248	ND		4.0	0.32	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1
PCB-1254	320		4.0	1.6	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1
PCB-1260	ND		4.0	0.68	ug/Kg	☼	08/08/18 09:42	08/29/18 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*58*		*54 - 142*	*08/08/18 09:42*	*08/29/18 00:38*	*1*
Tetrachloro-m-xylene	*23*	*X*	*58 - 122*	*08/08/18 09:42*	*08/29/18 00:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	34000	B	2000	44	mg/Kg			08/15/18 13:50	1
Total Solids	48.5		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	51		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.1				%			08/07/18 14:21	1
Medium Sand	2.2				%			08/07/18 14:21	1
Fine Sand	8.9				%			08/07/18 14:21	1
Silt	63.5				%			08/07/18 14:21	1
Clay	25.3				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S178-2to3.7

Date Collected: 08/02/18 16:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-18

Matrix: Solid
Percent Solids: 51.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	91	B	19	1.7	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Acenaphthene	74		19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Acenaphthylene	83		19	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Anthracene	130		19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Benzo[a]anthracene	290	B	19	2.8	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Benzo[a]pyrene	230	B	19	1.5	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Benzo[b]fluoranthene	300	B	19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Benzo[g,h,i]perylene	250	B	19	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Benzo[k]fluoranthene	91	B	19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Chrysene	310	B	19	5.6	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Dibenz(a,h)anthracene	44	B	19	2.7	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Fluoranthene	640	B	19	5.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Fluorene	78		19	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Indeno[1,2,3-cd]pyrene	210	B	19	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Naphthalene	190	B	19	3.0	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Phenanthrene	550	B	19	2.6	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10
Pyrene	810	B	19	3.6	ug/Kg	☼	08/06/18 17:18	08/08/18 21:15	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*57 - 120*	*08/06/18 17:18*	*08/08/18 21:15*	*10*

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	☼	08/08/18 09:42	08/29/18 10:57	1
PCB-1221	ND		3.8	1.8	ug/Kg	☼	08/08/18 09:42	08/29/18 10:57	1
PCB-1232	ND		3.8	0.89	ug/Kg	☼	08/08/18 09:42	08/29/18 10:57	1
PCB-1242	ND		3.8	0.93	ug/Kg	☼	08/08/18 09:42	08/29/18 10:57	1
PCB-1248	ND		3.8	0.30	ug/Kg	☼	08/08/18 09:42	08/29/18 10:57	1
PCB-1254	110		3.8	1.5	ug/Kg	☼	08/08/18 09:42	08/29/18 10:57	1
PCB-1260	ND		3.8	0.64	ug/Kg	☼	08/08/18 09:42	08/29/18 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*		*54 - 142*	*08/08/18 09:42*	*08/29/18 10:57*	*1*
Tetrachloro-m-xylene	*29*	*X*	*58 - 122*	*08/08/18 09:42*	*08/29/18 10:57*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	46000	B	2000	44	mg/Kg			08/15/18 13:55	1
Total Solids	51.2		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	54		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.2				%			08/07/18 14:21	1
Fine Sand	5.2				%			08/07/18 14:21	1
Silt	70.6				%			08/07/18 14:21	1
Clay	24.0				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S178-3.7to4.7

Date Collected: 08/02/18 16:05
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-19

Matrix: Solid
Percent Solids: 59.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	53	B	16	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Acenaphthene	39		16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Acenaphthylene	42		16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Anthracene	57		16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Benzo[a]anthracene	110	B	16	2.4	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Benzo[a]pyrene	83	B	16	1.3	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Benzo[b]fluoranthene	110	B	16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Benzo[g,h,i]perylene	95	B	16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Benzo[k]fluoranthene	31	B	16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Chrysene	130	B	16	4.8	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Dibenz(a,h)anthracene	11	J B	16	2.3	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Fluoranthene	270	B	16	4.4	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Fluorene	37		16	1.6	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Indeno[1,2,3-cd]pyrene	62	B	16	1.9	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Naphthalene	100	B	16	2.5	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Phenanthrene	270	B	16	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10
Pyrene	350	B	16	3.1	ug/Kg	☼	08/06/18 17:18	08/08/18 21:41	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*76*		*57 - 120*	*08/06/18 17:18*	*08/08/18 21:41*	*10*

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	☼	08/08/18 10:34	08/10/18 11:23	1
PCB-1221	ND		3.2	1.5	ug/Kg	☼	08/08/18 10:34	08/10/18 11:23	1
PCB-1232	ND		3.2	0.75	ug/Kg	☼	08/08/18 10:34	08/10/18 11:23	1
PCB-1242	ND		3.2	0.78	ug/Kg	☼	08/08/18 10:34	08/10/18 11:23	1
PCB-1248	ND		3.2	0.25	ug/Kg	☼	08/08/18 10:34	08/10/18 11:23	1
PCB-1254	35		3.2	1.3	ug/Kg	☼	08/08/18 10:34	08/10/18 11:23	1
PCB-1260	ND		3.2	0.54	ug/Kg	☼	08/08/18 10:34	08/10/18 11:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*54 - 142*	*08/08/18 10:34*	*08/10/18 11:23*	*1*
Tetrachloro-m-xylene	*65*		*58 - 122*	*08/08/18 10:34*	*08/10/18 11:23*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	30000	B	2000	44	mg/Kg			08/15/18 14:01	1
Total Solids	59.5		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	62		0.10	0.10	%			08/07/18 14:21	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/07/18 14:21	1
Coarse Sand	0.0				%			08/07/18 14:21	1
Medium Sand	0.3				%			08/07/18 14:21	1
Fine Sand	6.8				%			08/07/18 14:21	1
Silt	75.5				%			08/07/18 14:21	1
Clay	17.4				%			08/07/18 14:21	1

Client Sample ID: PDI-SC-S178-4.7to6.7

Date Collected: 08/02/18 16:10
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-20

Matrix: Solid
Percent Solids: 65.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	3.0	J B	7.5	0.67	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Acenaphthene	1.9	J	7.5	0.90	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Acenaphthylene	4.9	J	7.5	0.75	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Anthracene	3.4	J	7.5	0.90	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Benzo[a]anthracene	10	B	7.5	1.1	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Benzo[a]pyrene	5.0	J B	7.5	0.60	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Benzo[b]fluoranthene	7.7	B	7.5	0.88	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Benzo[g,h,i]perylene	4.1	J B	7.5	0.75	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Benzo[k]fluoranthene	3.2	J B	7.5	0.90	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Chrysene	8.9	B	7.5	2.2	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Dibenz(a,h)anthracene	1.4	J B	7.5	1.1	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Fluoranthene	16	B	7.5	2.1	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Fluorene	2.6	J	7.5	0.75	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Indeno[1,2,3-cd]pyrene	4.3	J B	7.5	0.90	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Naphthalene	5.7	J B	7.5	1.2	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Phenanthrene	15	B	7.5	1.0	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5
Pyrene	19	B	7.5	1.4	ug/Kg	☼	08/06/18 17:18	08/08/18 22:08	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*103*		*57 - 120*	*08/06/18 17:18*	*08/08/18 22:08*	*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	0.52	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1
PCB-1221	ND		3.0	1.4	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1
PCB-1232	ND		3.0	0.71	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1
PCB-1242	ND		3.0	0.74	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1
PCB-1248	ND		3.0	0.24	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1
PCB-1254	ND		3.0	1.2	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1
PCB-1260	0.92	J	3.0	0.52	ug/Kg	☼	08/08/18 10:34	08/10/18 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*54 - 142*	*08/08/18 10:34*	*08/10/18 11:40*	*1*
Tetrachloro-m-xylene	*67*		*58 - 122*	*08/08/18 10:34*	*08/10/18 11:40*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	17000	B	2000	44	mg/Kg			08/15/18 14:07	1
Total Solids	65.2		0.1	0.1	%			08/06/18 16:10	1
Total Solids @ 70°C	68		0.10	0.10	%			08/15/18 08:00	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	1.3				%			08/08/18 08:20	1
Coarse Sand	0.5				%			08/08/18 08:20	1
Medium Sand	0.1				%			08/08/18 08:20	1
Fine Sand	10.5				%			08/08/18 08:20	1
Silt	69.2				%			08/08/18 08:20	1
Clay	18.4				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S178-6.7to8.7

Date Collected: 08/02/18 16:15
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-21

Matrix: Solid
Percent Solids: 67.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	J B	1.4	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Acenaphthene	0.25	J B	1.4	0.16	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Acenaphthylene	ND		1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Anthracene	0.35	J B	1.4	0.16	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Benzo[a]anthracene	0.98	J	1.4	0.21	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Benzo[a]pyrene	1.4		1.4	0.11	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Benzo[b]fluoranthene	1.5		1.4	0.16	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Benzo[g,h,i]perylene	0.58	J	1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Benzo[k]fluoranthene	0.29	J	1.4	0.16	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Chrysene	1.4		1.4	0.41	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Dibenz(a,h)anthracene	ND		1.4	0.20	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Fluoranthene	1.6	B	1.4	0.38	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Fluorene	0.71	J B	1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Indeno[1,2,3-cd]pyrene	0.57	J	1.4	0.16	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Naphthalene	0.79	J B	1.4	0.22	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Phenanthrene	1.5	B	1.4	0.19	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1
Pyrene	1.9	B	1.4	0.26	ug/Kg	☼	08/07/18 11:50	08/10/18 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*63*		*57 - 120*	*08/07/18 11:50*	*08/10/18 00:19*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.9	0.48	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1
PCB-1232	ND		2.9	0.67	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1
PCB-1242	ND		2.9	0.70	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1
PCB-1254	ND		2.9	1.1	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1
PCB-1260	ND		2.9	0.48	ug/Kg	☼	08/08/18 10:34	08/10/18 11:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*62*		*54 - 142*	*08/08/18 10:34*	*08/10/18 11:58*	*1*
Tetrachloro-m-xylene	*66*		*58 - 122*	*08/08/18 10:34*	*08/10/18 11:58*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	15000	B	2000	44	mg/Kg			08/15/18 14:12	1
Total Solids	67.3		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	69		0.10	0.10	%			08/15/18 08:02	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	1.2				%			08/08/18 08:20	1
Medium Sand	0.1				%			08/08/18 08:20	1
Fine Sand	14.4				%			08/08/18 08:20	1
Silt	67.4				%			08/08/18 08:20	1
Clay	16.9				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S178-8.7to10.7
Date Collected: 08/02/18 16:20
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-22
Matrix: Solid
Percent Solids: 67.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.6	B	1.4	0.13	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Acenaphthene	0.72	J B	1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Acenaphthylene	ND		1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Anthracene	0.37	J B	1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Benzo[a]anthracene	0.94	J	1.4	0.22	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Chrysene	1.2	J	1.4	0.43	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Fluoranthene	1.3	J B	1.4	0.40	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Fluorene	1.2	J B	1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Naphthalene	1.0	J B	1.4	0.23	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Phenanthrene	1.9	B	1.4	0.20	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1
Pyrene	1.6	B	1.4	0.28	ug/Kg	☼	08/07/18 11:50	08/10/18 00:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		7.1	0.57	ug/Kg	☼	08/07/18 11:50	08/16/18 21:24	5
Benzo[b]fluoranthene	3.4	J	7.1	0.84	ug/Kg	☼	08/07/18 11:50	08/16/18 21:24	5
Benzo[g,h,i]perylene	2.1	J	7.1	0.71	ug/Kg	☼	08/07/18 11:50	08/16/18 21:24	5
Benzo[k]fluoranthene	ND		7.1	0.86	ug/Kg	☼	08/07/18 11:50	08/16/18 21:24	5
Dibenz(a,h)anthracene	ND		7.1	1.0	ug/Kg	☼	08/07/18 11:50	08/16/18 21:24	5
Indeno[1,2,3-cd]pyrene	1.5	J	7.1	0.86	ug/Kg	☼	08/07/18 11:50	08/16/18 21:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*57 - 120*	*08/07/18 11:50*	*08/16/18 21:24*	*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	0.50	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1
PCB-1232	ND		2.9	0.69	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1
PCB-1242	ND		2.9	0.72	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1
PCB-1248	ND		2.9	0.24	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1
PCB-1254	ND		2.9	1.2	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1
PCB-1260	ND		2.9	0.50	ug/Kg	☼	08/08/18 10:34	08/10/18 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*63*		*54 - 142*	*08/08/18 10:34*	*08/10/18 14:55*	*1*
Tetrachloro-m-xylene	*62*		*58 - 122*	*08/08/18 10:34*	*08/10/18 14:55*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	15000	B	2000	44	mg/Kg			08/15/18 14:18	1
Total Solids	67.2		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	71		0.10	0.10	%			08/15/18 08:03	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.7				%			08/08/18 08:20	1
Coarse Sand	0.2				%			08/08/18 08:20	1
Medium Sand	0.1				%			08/08/18 08:20	1
Fine Sand	14.6				%			08/08/18 08:20	1
Silt	68.7				%			08/08/18 08:20	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S178-8.7to10.7
Date Collected: 08/02/18 16:20
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-22
Matrix: Solid
Percent Solids: 67.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	15.7				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S178-10.7to12.7

Date Collected: 08/02/18 16:25
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-23

Matrix: Solid
Percent Solids: 67.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.50	J B	1.4	0.13	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Acenaphthene	0.31	J B	1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Acenaphthylene	ND		1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Anthracene	0.31	J B	1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Benzo[a]anthracene	0.84	J	1.4	0.22	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Benzo[a]pyrene	ND		1.4	0.11	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Benzo[b]fluoranthene	1.6		1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Benzo[g,h,i]perylene	0.48	J	1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Benzo[k]fluoranthene	0.27	J	1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Chrysene	1.3	J	1.4	0.43	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Dibenz(a,h)anthracene	ND		1.4	0.21	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Fluoranthene	1.0	J B	1.4	0.40	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Fluorene	0.72	J B	1.4	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Indeno[1,2,3-cd]pyrene	0.45	J	1.4	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Naphthalene	0.75	J B	1.4	0.23	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Phenanthrene	1.3	J B	1.4	0.20	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1
Pyrene	1.4	B	1.4	0.28	ug/Kg	☼	08/07/18 11:50	08/10/18 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*69*		*57 - 120*	*08/07/18 11:50*	*08/10/18 01:11*	*1*

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	☼	08/08/18 10:34	08/10/18 15:13	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	08/08/18 10:34	08/10/18 15:13	1
PCB-1232	ND		2.9	0.68	ug/Kg	☼	08/08/18 10:34	08/10/18 15:13	1
PCB-1242	ND		2.9	0.71	ug/Kg	☼	08/08/18 10:34	08/10/18 15:13	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	08/08/18 10:34	08/10/18 15:13	1
PCB-1254	ND		2.9	1.1	ug/Kg	☼	08/08/18 10:34	08/10/18 15:13	1
PCB-1260	ND		2.9	0.49	ug/Kg	☼	08/08/18 10:34	08/10/18 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*69*		*54 - 142*	*08/08/18 10:34*	*08/10/18 15:13*	*1*
Tetrachloro-m-xylene	*64*		*58 - 122*	*08/08/18 10:34*	*08/10/18 15:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	14000	B	2000	44	mg/Kg			08/15/18 14:23	1
Total Solids	67.7		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	70		0.10	0.10	%			08/15/18 08:04	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.3				%			08/08/18 08:20	1
Medium Sand	0.0				%			08/08/18 08:20	1
Fine Sand	13.2				%			08/08/18 08:20	1
Silt	70.6				%			08/08/18 08:20	1
Clay	15.9				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S178-12.7to14

Date Collected: 08/02/18 16:30
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-24

Matrix: Solid
Percent Solids: 66.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.57	J B	1.5	0.13	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Acenaphthene	0.34	J B	1.5	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Acenaphthylene	0.54	J B	1.5	0.15	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Anthracene	0.34	J B	1.5	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Benzo[a]anthracene	1.3	J	1.5	0.22	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Benzo[a]pyrene	ND		1.5	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Benzo[b]fluoranthene	1.8		1.5	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Benzo[g,h,i]perylene	0.59	J	1.5	0.15	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Benzo[k]fluoranthene	0.32	J	1.5	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Chrysene	1.7		1.5	0.44	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Dibenz(a,h)anthracene	0.27	J	1.5	0.21	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Fluoranthene	1.9	B	1.5	0.41	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Fluorene	0.70	J B	1.5	0.15	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Indeno[1,2,3-cd]pyrene	0.70	J	1.5	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Naphthalene	0.78	J B	1.5	0.23	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Phenanthrene	1.6	B	1.5	0.20	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1
Pyrene	2.3	B	1.5	0.28	ug/Kg	☼	08/07/18 11:50	08/10/18 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*68*		*57 - 120*	*08/07/18 11:50*	*08/10/18 01:37*	*1*

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	☼	08/08/18 10:34	08/10/18 15:30	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	08/08/18 10:34	08/10/18 15:30	1
PCB-1232	ND		2.9	0.69	ug/Kg	☼	08/08/18 10:34	08/10/18 15:30	1
PCB-1242	ND		2.9	0.72	ug/Kg	☼	08/08/18 10:34	08/10/18 15:30	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	08/08/18 10:34	08/10/18 15:30	1
PCB-1254	ND		2.9	1.2	ug/Kg	☼	08/08/18 10:34	08/10/18 15:30	1
PCB-1260	ND		2.9	0.50	ug/Kg	☼	08/08/18 10:34	08/10/18 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*74*		*54 - 142*	*08/08/18 10:34*	*08/10/18 15:30*	*1*
Tetrachloro-m-xylene	*69*		*58 - 122*	*08/08/18 10:34*	*08/10/18 15:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	15000	B	2000	44	mg/Kg			08/15/18 14:29	1
Total Solids	66.7		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	69		0.10	0.10	%			08/15/18 08:05	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.1				%			08/08/18 08:20	1
Medium Sand	0.1				%			08/08/18 08:20	1
Fine Sand	9.9				%			08/08/18 08:20	1
Silt	73.0				%			08/08/18 08:20	1
Clay	17.0				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S083-0to1.6

Date Collected: 08/01/18 17:30
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-25

Matrix: Solid
Percent Solids: 35.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1400	B	130	12	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Acenaphthene	31000	B	130	16	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Acenaphthylene	2600	B	130	13	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Anthracene	22000	B	130	16	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Benzo[a]anthracene	21000		130	20	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Benzo[a]pyrene	21000		130	11	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Benzo[b]fluoranthene	22000		130	16	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Benzo[g,h,i]perylene	17000		130	13	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Benzo[k]fluoranthene	5500		130	16	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Chrysene	23000		130	40	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Dibenz(a,h)anthracene	2000		130	19	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Fluoranthene	62000	B	130	37	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Fluorene	14000	B	130	13	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Indeno[1,2,3-cd]pyrene	17000		130	16	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Naphthalene	3200	B	130	21	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Phenanthrene	93000	B	130	18	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50
Pyrene	78000	B	130	26	ug/Kg	☼	08/07/18 11:50	08/10/18 02:03	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*57 - 120*	*08/07/18 11:50*	*08/10/18 02:03*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		28	4.7	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1
PCB-1221	ND		28	13	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1
PCB-1232	ND		28	6.5	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1
PCB-1242	ND		28	6.8	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1
PCB-1248	ND		28	2.2	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1
PCB-1254	ND		28	11	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1
PCB-1260	ND		28	4.7	ug/Kg	☼	08/08/18 10:34	08/10/18 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*84*		*54 - 142*	*08/08/18 10:34*	*08/10/18 15:48*	*1*
Tetrachloro-m-xylene	*167*	*X*	*58 - 122*	*08/08/18 10:34*	*08/10/18 15:48*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	47000		2000	44	mg/Kg			08/15/18 09:13	1
Total Solids	35.5		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	28		0.10	0.10	%			08/15/18 08:06	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.1				%			08/08/18 08:20	1
Medium Sand	0.4				%			08/08/18 08:20	1
Fine Sand	14.1				%			08/08/18 08:20	1
Silt	65.5				%			08/08/18 08:20	1
Clay	19.9				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S083-1.6to3.5

Date Collected: 08/01/18 17:35
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-26

Matrix: Solid
Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	710	B	30	2.7	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Acenaphthene	16000		30	3.6	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Acenaphthylene	1500		30	3.0	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Anthracene	12000	B	30	3.6	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Benzo[a]anthracene	11000	B	30	4.6	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Benzo[a]pyrene	14000		30	2.4	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Benzo[b]fluoranthene	12000	B	30	3.6	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Benzo[g,h,i]perylene	11000		30	3.0	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Benzo[k]fluoranthene	4300	B	30	3.6	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Chrysene	13000		30	9.1	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Dibenz(a,h)anthracene	1400		30	4.4	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Fluoranthene	36000		30	8.5	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Fluorene	8400		30	3.0	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Indeno[1,2,3-cd]pyrene	10000		30	3.6	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Naphthalene	620		30	4.8	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Phenanthrene	59000	B	30	4.2	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25
Pyrene	44000		30	5.9	ug/Kg	☼	08/08/18 11:34	08/10/18 15:59	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*90*		*57 - 120*	*08/08/18 11:34*	*08/10/18 15:59*	*25*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1
PCB-1221	ND		12	5.7	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1
PCB-1232	ND		12	2.8	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1
PCB-1242	ND		12	3.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1
PCB-1248	ND		12	0.96	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1
PCB-1254	ND		12	4.8	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1
PCB-1260	ND		12	2.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*90*		*54 - 142*	*08/08/18 10:34*	*08/10/18 16:06*	*1*
Tetrachloro-m-xylene	*236*	*X*	*58 - 122*	*08/08/18 10:34*	*08/10/18 16:06*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	3100		2000	44	mg/Kg			08/15/18 09:47	1
Total Solids	81.1		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	83		0.10	0.10	%			08/15/18 08:07	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.2				%			08/08/18 08:20	1
Coarse Sand	0.9				%			08/08/18 08:20	1
Medium Sand	34.5				%			08/08/18 08:20	1
Fine Sand	58.5				%			08/08/18 08:20	1
Silt	4.3				%			08/08/18 08:20	1
Clay	1.7				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S083-3.5to5.0

Date Collected: 08/01/18 17:40
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-27

Matrix: Solid
Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	330	B	59	5.3	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Acenaphthene	21000	B	59	7.1	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Acenaphthylene	1500	B	59	5.9	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Anthracene	13000	B	59	7.1	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Benzo[a]anthracene	12000		59	8.9	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Benzo[a]pyrene	11000		59	4.7	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Benzo[b]fluoranthene	11000		59	6.9	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Benzo[g,h,i]perylene	8900		59	5.9	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Benzo[k]fluoranthene	2900		59	7.1	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Chrysene	11000		59	18	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Dibenz(a,h)anthracene	1100		59	8.5	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Fluoranthene	36000	B	59	16	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Fluorene	10000	B	59	5.9	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Indeno[1,2,3-cd]pyrene	9000		59	7.1	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Naphthalene	920	B	59	9.4	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50
Pyrene	45000	B	59	11	ug/Kg	☼	08/07/18 11:50	08/10/18 02:30	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*85*		*57 - 120*	*08/07/18 11:50*	*08/10/18 02:30*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	130000	B	590	81	ug/Kg	☼	08/07/18 11:50	08/16/18 21:47	500

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.1	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1
PCB-1221	ND		12	5.8	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1
PCB-1232	ND		12	2.9	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1
PCB-1242	ND		12	3.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1
PCB-1248	ND		12	0.98	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1
PCB-1254	ND		12	4.9	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1
PCB-1260	ND		12	2.1	ug/Kg	☼	08/08/18 10:34	08/10/18 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*90*		*54 - 142*	*08/08/18 10:34*	*08/10/18 16:23*	*1*
Tetrachloro-m-xylene	*272*	*X*	*58 - 122*	*08/08/18 10:34*	*08/10/18 16:23*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	4300		2000	44	mg/Kg			08/15/18 09:53	1
Total Solids	79.9		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	83		0.10	0.10	%			08/15/18 08:08	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.8				%			08/08/18 08:20	1
Coarse Sand	1.0				%			08/08/18 08:20	1
Medium Sand	33.0				%			08/08/18 08:20	1
Fine Sand	57.1				%			08/08/18 08:20	1
Silt	6.5				%			08/08/18 08:20	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S083-3.5to5.0
Date Collected: 08/01/18 17:40
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-27
Matrix: Solid
Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	1.7				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S083-5to6.6

Date Collected: 08/01/18 17:45
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-28

Matrix: Solid
Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	450	B	60	5.4	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Acenaphthene	28000	B	60	7.2	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Acenaphthylene	2600	B	60	6.0	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Anthracene	21000	B	60	7.2	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Benzo[a]anthracene	19000		60	9.2	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Benzo[a]pyrene	20000		60	4.8	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Benzo[b]fluoranthene	20000		60	7.1	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Benzo[g,h,i]perylene	16000		60	6.0	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Benzo[k]fluoranthene	5000		60	7.2	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Chrysene	19000		60	18	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Dibenz(a,h)anthracene	2200		60	8.7	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Fluorene	17000	B	60	6.0	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Indeno[1,2,3-cd]pyrene	16000		60	7.2	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50
Naphthalene	1400	B	60	9.7	ug/Kg	☼	08/07/18 11:50	08/10/18 02:56	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*89*		*57 - 120*	*08/07/18 11:50*	*08/10/18 02:56*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	54000	B	600	170	ug/Kg	☼	08/07/18 11:50	08/16/18 22:09	500
Phenanthrene	80000	B	600	83	ug/Kg	☼	08/07/18 11:50	08/16/18 22:09	500
Pyrene	66000	B	600	120	ug/Kg	☼	08/07/18 11:50	08/16/18 22:09	500

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		13	2.1	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1
PCB-1221	ND		13	6.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1
PCB-1232	ND		13	3.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1
PCB-1242	ND		13	3.1	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1
PCB-1248	ND		13	1.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1
PCB-1254	ND		13	5.0	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1
PCB-1260	ND		13	2.1	ug/Kg	☼	08/08/18 10:34	08/10/18 16:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*54 - 142*	*08/08/18 10:34*	*08/10/18 16:41*	*1*
Tetrachloro-m-xylene	*79*		*58 - 122*	*08/08/18 10:34*	*08/10/18 16:41*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	7800		2000	44	mg/Kg			08/15/18 11:27	1
Total Solids	79.1		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	81		0.10	0.10	%			08/15/18 08:09	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.8				%			08/08/18 08:20	1
Coarse Sand	0.2				%			08/08/18 08:20	1
Medium Sand	25.2				%			08/08/18 08:20	1
Fine Sand	64.3				%			08/08/18 08:20	1
Silt	6.1				%			08/08/18 08:20	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S083-5to6.6
Date Collected: 08/01/18 17:45
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-28
Matrix: Solid
Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	3.4				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-0to2

Date Collected: 08/01/18 15:40
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-29

Matrix: Solid
Percent Solids: 80.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	4.2	B	1.2	0.11	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Acenaphthene	61	B	1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Acenaphthylene	8.8	B	1.2	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Anthracene	36	B	1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Benzo[a]anthracene	130		1.2	0.18	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Benzo[a]pyrene	70		1.2	0.095	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Benzo[b]fluoranthene	92		1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Benzo[g,h,i]perylene	47		1.2	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Benzo[k]fluoranthene	30		1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Chrysene	120		1.2	0.35	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Dibenz(a,h)anthracene	7.6		1.2	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Fluoranthene	440	B	1.2	0.33	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Fluorene	17	B	1.2	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Indeno[1,2,3-cd]pyrene	54		1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Naphthalene	8.7	B	1.2	0.19	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Phenanthrene	420	B	1.2	0.16	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1
Pyrene	480	B	1.2	0.23	ug/Kg	☼	08/07/18 11:50	08/10/18 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*73*		*57 - 120*	*08/07/18 11:50*	*08/10/18 03:22*	*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	0.42	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1
PCB-1221	ND		2.5	1.2	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1
PCB-1232	ND		2.5	0.58	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1
PCB-1242	ND		2.5	0.60	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1
PCB-1248	ND		2.5	0.20	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1
PCB-1254	23		2.5	0.97	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1
PCB-1260	ND		2.5	0.42	ug/Kg	☼	08/08/18 10:34	08/10/18 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*54 - 142*	*08/08/18 10:34*	*08/10/18 16:59*	*1*
Tetrachloro-m-xylene	*58*		*58 - 122*	*08/08/18 10:34*	*08/10/18 16:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	1700	J	2000	44	mg/Kg			08/15/18 10:04	1
Total Solids	80.1		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	82		0.10	0.10	%			08/15/18 08:10	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.5				%			08/08/18 08:20	1
Medium Sand	29.6				%			08/08/18 08:20	1
Fine Sand	62.5				%			08/08/18 08:20	1
Silt	3.9				%			08/08/18 08:20	1
Clay	3.4				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-2to4

Date Collected: 08/01/18 15:45
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-30

Matrix: Solid
Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	4.2	B	1.2	0.11	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Acenaphthene	140	B	1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Acenaphthylene	8.9	B	1.2	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Anthracene	37	B	1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Benzo[a]anthracene	76		1.2	0.18	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Benzo[a]pyrene	58		1.2	0.096	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Benzo[b]fluoranthene	74		1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Benzo[g,h,i]perylene	48		1.2	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Benzo[k]fluoranthene	23		1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Chrysene	78		1.2	0.36	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Dibenz(a,h)anthracene	6.0		1.2	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Fluoranthene	310	B	1.2	0.34	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Fluorene	20	B	1.2	0.12	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Indeno[1,2,3-cd]pyrene	50		1.2	0.14	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Naphthalene	12	B	1.2	0.19	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Phenanthrene	510	B	1.2	0.17	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1
Pyrene	380	B	1.2	0.23	ug/Kg	☼	08/07/18 11:50	08/10/18 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*63*		*57 - 120*	*08/07/18 11:50*	*08/10/18 03:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		5.0	0.84	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1
PCB-1221	ND		5.0	2.4	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1
PCB-1232	ND		5.0	1.2	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1
PCB-1242	ND		5.0	1.2	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1
PCB-1248	ND		5.0	0.40	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1
PCB-1254	62		5.0	2.0	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1
PCB-1260	ND		5.0	0.84	ug/Kg	☼	08/08/18 10:34	08/10/18 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*70*		*54 - 142*	*08/08/18 10:34*	*08/10/18 17:17*	*1*
Tetrachloro-m-xylene	*69*		*58 - 122*	*08/08/18 10:34*	*08/10/18 17:17*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	2000		2000	44	mg/Kg			08/15/18 10:10	1
Total Solids	79.1		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	82		0.10	0.10	%			08/15/18 08:11	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.1				%			08/08/18 08:20	1
Coarse Sand	0.2				%			08/08/18 08:20	1
Medium Sand	28.6				%			08/08/18 08:20	1
Fine Sand	60.0				%			08/08/18 08:20	1
Silt	6.0				%			08/08/18 08:20	1
Clay	5.1				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-4to6

Date Collected: 08/01/18 15:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-31

Matrix: Solid
Percent Solids: 65.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.9	B	1.5	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Acenaphthene	3.7		1.5	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Acenaphthylene	0.96	J	1.5	0.15	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Anthracene	4.7	B	1.5	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Benzo[a]anthracene	8.4	B	1.5	0.23	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Benzo[a]pyrene	8.0		1.5	0.12	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Benzo[b]fluoranthene	10	B	1.5	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Benzo[g,h,i]perylene	7.3		1.5	0.15	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Benzo[k]fluoranthene	4.1	B	1.5	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Chrysene	11		1.5	0.45	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Dibenz(a,h)anthracene	1.2	J	1.5	0.21	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Fluoranthene	38		1.5	0.42	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Fluorene	2.3		1.5	0.15	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Indeno[1,2,3-cd]pyrene	7.2		1.5	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Naphthalene	9.1		1.5	0.24	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Phenanthrene	44	B	1.5	0.21	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1
Pyrene	42		1.5	0.29	ug/Kg	☼	08/08/18 11:34	08/10/18 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*81*		*57 - 120*	*08/08/18 11:34*	*08/10/18 16:22*	*1*

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	☼	08/08/18 10:34	08/16/18 17:10	1
PCB-1221	ND		2.9	1.4	ug/Kg	☼	08/08/18 10:34	08/16/18 17:10	1
PCB-1232	ND		2.9	0.68	ug/Kg	☼	08/08/18 10:34	08/16/18 17:10	1
PCB-1242	ND		2.9	0.71	ug/Kg	☼	08/08/18 10:34	08/16/18 17:10	1
PCB-1248	ND		2.9	0.23	ug/Kg	☼	08/08/18 10:34	08/16/18 17:10	1
PCB-1254	1.3	J	2.9	1.1	ug/Kg	☼	08/08/18 10:34	08/16/18 17:10	1
PCB-1260	ND		2.9	0.49	ug/Kg	☼	08/08/18 10:34	08/16/18 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*60*		*54 - 142*	*08/08/18 10:34*	*08/16/18 17:10*	*1*
Tetrachloro-m-xylene	*60*		*58 - 122*	*08/08/18 10:34*	*08/16/18 17:10*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	3900		2000	44	mg/Kg			08/15/18 10:15	1
Total Solids	65.8		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	70		0.10	0.10	%			08/15/18 08:12	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	1.5				%			08/08/18 08:20	1
Coarse Sand	0.5				%			08/08/18 08:20	1
Medium Sand	1.3				%			08/08/18 08:20	1
Fine Sand	32.2				%			08/08/18 08:20	1
Silt	50.5				%			08/08/18 08:20	1
Clay	14.0				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-6to8

Date Collected: 08/01/18 15:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-32

Matrix: Solid
Percent Solids: 67.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.81	J B	1.4	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Acenaphthene	2.3		1.4	0.17	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Acenaphthylene	0.64	J	1.4	0.14	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Anthracene	2.4	B	1.4	0.17	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Benzo[a]anthracene	4.8	B	1.4	0.21	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Benzo[a]pyrene	4.4		1.4	0.11	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Benzo[b]fluoranthene	6.4	B	1.4	0.17	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Benzo[g,h,i]perylene	4.0		1.4	0.14	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Benzo[k]fluoranthene	2.2	B	1.4	0.17	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Chrysene	5.7		1.4	0.42	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Dibenz(a,h)anthracene	0.83	J	1.4	0.20	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Fluoranthene	23		1.4	0.39	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Fluorene	1.4		1.4	0.14	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Indeno[1,2,3-cd]pyrene	3.9		1.4	0.17	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Naphthalene	2.0		1.4	0.22	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Phenanthrene	30	B	1.4	0.19	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1
Pyrene	24		1.4	0.27	ug/Kg	☼	08/08/18 11:34	08/10/18 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*82*		*57 - 120*	*08/08/18 11:34*	*08/10/18 16:44*	*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	☼	08/08/18 10:34	08/10/18 17:52	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	08/08/18 10:34	08/10/18 17:52	1
PCB-1232	ND		2.8	0.66	ug/Kg	☼	08/08/18 10:34	08/10/18 17:52	1
PCB-1242	ND		2.8	0.69	ug/Kg	☼	08/08/18 10:34	08/10/18 17:52	1
PCB-1248	ND		2.8	0.23	ug/Kg	☼	08/08/18 10:34	08/10/18 17:52	1
PCB-1254	6.4		2.8	1.1	ug/Kg	☼	08/08/18 10:34	08/10/18 17:52	1
PCB-1260	ND		2.8	0.48	ug/Kg	☼	08/08/18 10:34	08/10/18 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*56*		*54 - 142*	*08/08/18 10:34*	*08/10/18 17:52*	*1*
Tetrachloro-m-xylene	*58*		*58 - 122*	*08/08/18 10:34*	*08/10/18 17:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	3800		2000	44	mg/Kg			08/15/18 10:21	1
Total Solids	67.3		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	71		0.10	0.10	%			08/15/18 08:13	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.1				%			08/08/18 08:20	1
Medium Sand	0.5				%			08/08/18 08:20	1
Fine Sand	43.2				%			08/08/18 08:20	1
Silt	42.5				%			08/08/18 08:20	1
Clay	13.6				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-8to10

Date Collected: 08/01/18 16:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-33

Matrix: Solid
Percent Solids: 71.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.67	J B	1.3	0.12	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Acenaphthene	1.4		1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Acenaphthylene	0.35	J	1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Anthracene	1.3	B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Benzo[a]anthracene	2.9	B F2	1.3	0.20	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Benzo[a]pyrene	2.3		1.3	0.11	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Benzo[b]fluoranthene	4.2	B F2	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Benzo[g,h,i]perylene	2.5		1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Benzo[k]fluoranthene	1.5	B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Chrysene	3.5	F2	1.3	0.40	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Dibenz(a,h)anthracene	0.64	J	1.3	0.19	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Fluoranthene	13		1.3	0.37	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Fluorene	0.88	J	1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Indeno[1,2,3-cd]pyrene	2.5		1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Naphthalene	1.1	J	1.3	0.21	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Phenanthrene	14	B	1.3	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1
Pyrene	14		1.3	0.26	ug/Kg	☼	08/08/18 11:34	08/10/18 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*82*		*57 - 120*	*08/08/18 11:34*	*08/10/18 17:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1	2.8	0.47	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1
PCB-1232	ND		2.8	0.65	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1
PCB-1242	ND		2.8	0.68	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1
PCB-1248	ND		2.8	0.22	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1
PCB-1254	ND		2.8	1.1	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1
PCB-1260	ND	F1	2.8	0.47	ug/Kg	☼	08/08/18 10:34	08/10/18 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*61*		*54 - 142*	*08/08/18 10:34*	*08/10/18 18:10*	*1*
Tetrachloro-m-xylene	*62*		*58 - 122*	*08/08/18 10:34*	*08/10/18 18:10*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	3300		2000	44	mg/Kg			08/15/18 08:43	1
Total Solids	71.2		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	74		0.10	0.10	%			08/15/18 08:14	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.1				%			08/08/18 08:20	1
Coarse Sand	0.2				%			08/08/18 08:20	1
Medium Sand	0.4				%			08/08/18 08:20	1
Fine Sand	59.4				%			08/08/18 08:20	1
Silt	30.4				%			08/08/18 08:20	1
Clay	9.5				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-10to12

Date Collected: 08/01/18 16:05
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-34

Matrix: Solid
Percent Solids: 68.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.70	J B	1.3	0.12	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Acenaphthene	0.50	J	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Acenaphthylene	ND		1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Anthracene	0.61	J B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Benzo[a]anthracene	1.2	J B	1.3	0.20	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Benzo[a]pyrene	0.94	J	1.3	0.11	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Benzo[b]fluoranthene	2.6	B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Benzo[g,h,i]perylene	1.3		1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Benzo[k]fluoranthene	0.85	J B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Chrysene	1.3		1.3	0.40	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Dibenz(a,h)anthracene	0.58	J	1.3	0.19	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Fluoranthene	2.6		1.3	0.37	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Fluorene	0.59	J	1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Indeno[1,2,3-cd]pyrene	1.1	J	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Naphthalene	0.78	J	1.3	0.21	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Phenanthrene	3.3	B	1.3	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1
Pyrene	3.0		1.3	0.26	ug/Kg	☼	08/08/18 11:34	08/10/18 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*79*		*57 - 120*	*08/08/18 11:34*	*08/10/18 18:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.8	0.48	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1
PCB-1232	ND		2.8	0.67	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1
PCB-1242	ND		2.8	0.69	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1
PCB-1248	ND		2.8	0.23	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1
PCB-1254	ND		2.8	1.1	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1
PCB-1260	ND		2.8	0.48	ug/Kg	☼	08/08/18 10:34	08/16/18 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*75*		*54 - 142*	*08/08/18 10:34*	*08/16/18 17:45*	*1*
Tetrachloro-m-xylene	*68*		*58 - 122*	*08/08/18 10:34*	*08/16/18 17:45*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	7700		2000	44	mg/Kg			08/15/18 10:27	1
Total Solids	68.9		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	71		0.10	0.10	%			08/15/18 08:15	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.0				%			08/08/18 08:20	1
Medium Sand	0.1				%			08/08/18 08:20	1
Fine Sand	39.7				%			08/08/18 08:20	1
Silt	52.4				%			08/08/18 08:20	1
Clay	7.9				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S032-12to14

Date Collected: 08/01/18 16:10
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-35

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	0.86	J B	1.3	0.12	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Acenaphthene	0.53	J	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Acenaphthylene	ND		1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Anthracene	0.67	J B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Benzo[a]anthracene	1.3	B	1.3	0.20	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Benzo[a]pyrene	1.1	J	1.3	0.11	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Benzo[b]fluoranthene	2.7	B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Benzo[g,h,i]perylene	1.1	J	1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Benzo[k]fluoranthene	0.67	J B	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Chrysene	1.8		1.3	0.40	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Dibenz(a,h)anthracene	0.60	J	1.3	0.19	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Fluoranthene	2.7		1.3	0.37	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Fluorene	0.92	J	1.3	0.13	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Indeno[1,2,3-cd]pyrene	1.0	J	1.3	0.16	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Naphthalene	1.0	J	1.3	0.21	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Phenanthrene	4.3	B	1.3	0.18	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1
Pyrene	3.0		1.3	0.26	ug/Kg	☼	08/08/18 11:34	08/10/18 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*80*		*57 - 120*	*08/08/18 11:34*	*08/10/18 18:36*	*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	0.47	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1
PCB-1221	ND		2.8	1.3	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1
PCB-1232	ND		2.8	0.65	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1
PCB-1242	ND		2.8	0.68	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1
PCB-1248	ND		2.8	0.22	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1
PCB-1254	ND		2.8	1.1	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1
PCB-1260	ND		2.8	0.47	ug/Kg	☼	08/08/18 10:34	08/16/18 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*73*		*54 - 142*	*08/08/18 10:34*	*08/16/18 18:03*	*1*
Tetrachloro-m-xylene	*70*		*58 - 122*	*08/08/18 10:34*	*08/16/18 18:03*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	11000		2000	44	mg/Kg			08/15/18 10:32	1
Total Solids	70.4		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	73		0.10	0.10	%			08/15/18 08:16	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/08/18 08:20	1
Coarse Sand	0.1				%			08/08/18 08:20	1
Medium Sand	0.2				%			08/08/18 08:20	1
Fine Sand	34.9				%			08/08/18 08:20	1
Silt	55.3				%			08/08/18 08:20	1
Clay	9.5				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S172-0to2
Date Collected: 08/02/18 17:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-36
Matrix: Solid
Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	45	J B	120	11	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Acenaphthene	60	J	120	14	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Acenaphthylene	70	J	120	12	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Anthracene	69	J	120	14	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Benzo[a]anthracene	180	*	120	18	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Benzo[a]pyrene	180		120	9.4	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Benzo[b]fluoranthene	300	*	120	14	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Benzo[g,h,i]perylene	160	*	120	12	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Benzo[k]fluoranthene	110	J	120	14	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Chrysene	290		120	35	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Dibenz(a,h)anthracene	ND	*	120	17	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Fluoranthene	490		120	33	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Fluorene	46	J	120	12	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Indeno[1,2,3-cd]pyrene	170	*	120	14	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Naphthalene	160	B	120	19	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Phenanthrene	340		120	16	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50
Pyrene	600		120	23	ug/Kg	☼	08/10/18 17:49	08/13/18 16:26	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*82*		*57 - 120*	*08/10/18 17:49*	*08/13/18 16:26*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	44	J H B	240	21	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Acenaphthene	120	J H	240	28	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Acenaphthylene	110	J H	240	24	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Anthracene	130	J H	240	28	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Benzo[a]anthracene	200	J H	240	36	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Benzo[a]pyrene	210	J H	240	19	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Benzo[b]fluoranthene	290	H	240	28	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Benzo[g,h,i]perylene	170	J H	240	24	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Benzo[k]fluoranthene	150	J H	240	28	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Chrysene	320	H	240	71	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Dibenz(a,h)anthracene	45	J H	240	34	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Fluoranthene	590	H	240	66	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Fluorene	56	J H	240	24	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Indeno[1,2,3-cd]pyrene	160	J H	240	28	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Naphthalene	220	J H B	240	38	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Phenanthrene	440	H	240	32	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100
Pyrene	730	H	240	46	ug/Kg	☼	08/20/18 12:34	08/21/18 18:50	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*86*		*57 - 120*	*08/20/18 12:34*	*08/21/18 18:50*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		9.6	1.6	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1
PCB-1221	ND		9.6	4.6	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1
PCB-1232	ND		9.6	2.3	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1
PCB-1242	ND		9.6	2.4	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1

Client Sample ID: PDI-SC-S172-0to2
Date Collected: 08/02/18 17:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-36
Matrix: Solid
Percent Solids: 41.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		9.6	0.77	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1
PCB-1254	**150**		9.6	3.8	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1
PCB-1260	ND		9.6	1.6	ug/Kg	☼	08/08/18 10:34	08/16/18 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*65*		*54 - 142*	*08/08/18 10:34*	*08/16/18 18:20*	*1*
Tetrachloro-m-xylene	*76*		*58 - 122*	*08/08/18 10:34*	*08/16/18 18:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**44000**		2000	44	mg/Kg			08/15/18 10:38	1
Total Solids	**41.4**		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	**43**		0.10	0.10	%			08/15/18 08:17	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**0.6**				%			08/08/18 08:20	1
Coarse Sand	**0.3**				%			08/08/18 08:20	1
Medium Sand	**0.6**				%			08/08/18 08:20	1
Fine Sand	**11.4**				%			08/08/18 08:20	1
Silt	**61.1**				%			08/08/18 08:20	1
Clay	**26.0**				%			08/08/18 08:20	1

Client Sample ID: PDI-SC-S218-6to8

Date Collected: 08/02/18 11:35
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-37

Matrix: Solid
Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.6	B	1.1	0.10	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Acenaphthene	0.58	J	1.1	0.13	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Acenaphthylene	0.76	J	1.1	0.11	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Anthracene	0.72	J	1.1	0.13	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Benzo[a]anthracene	2.4	F1 *	1.1	0.17	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Benzo[a]pyrene	2.2		1.1	0.089	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Benzo[b]fluoranthene	2.4	*	1.1	0.13	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Benzo[g,h,i]perylene	2.2	*	1.1	0.11	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Benzo[k]fluoranthene	1.4		1.1	0.13	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Chrysene	2.7		1.1	0.33	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Dibenz(a,h)anthracene	0.44	J *	1.1	0.16	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Fluoranthene	3.2		1.1	0.31	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Fluorene	1.1		1.1	0.11	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Indeno[1,2,3-cd]pyrene	2.4	*	1.1	0.13	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Naphthalene	1.3	B	1.1	0.18	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Phenanthrene	3.9		1.1	0.15	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1
Pyrene	5.5		1.1	0.22	ug/Kg	☼	08/10/18 17:49	08/13/18 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*97*		*57 - 120*	*08/10/18 17:49*	*08/13/18 16:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.93	J H B	1.1	0.096	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Acenaphthene	1.2	H	1.1	0.13	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Acenaphthylene	0.89	J H	1.1	0.11	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Anthracene	1.3	H	1.1	0.13	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Benzo[a]anthracene	1.7	H	1.1	0.16	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Benzo[a]pyrene	1.5	H	1.1	0.085	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Benzo[b]fluoranthene	2.0	H F2	1.1	0.13	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Benzo[g,h,i]perylene	2.4	H	1.1	0.11	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Benzo[k]fluoranthene	0.60	J H	1.1	0.13	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Chrysene	2.2	H F2	1.1	0.32	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Dibenz(a,h)anthracene	0.33	J H	1.1	0.15	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Fluoranthene	3.1	H	1.1	0.30	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Fluorene	0.49	J H	1.1	0.11	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Indeno[1,2,3-cd]pyrene	1.5	H	1.1	0.13	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Naphthalene	1.8	H B	1.1	0.17	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Phenanthrene	4.1	H	1.1	0.15	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1
Pyrene	5.5	H	1.1	0.21	ug/Kg	☼	08/20/18 12:34	08/21/18 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*95*		*57 - 120*	*08/20/18 12:34*	*08/21/18 19:16*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1	2.2	0.37	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1
PCB-1221	ND		2.2	1.0	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1
PCB-1232	ND		2.2	0.52	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1
PCB-1242	ND		2.2	0.54	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S218-6to8
Date Collected: 08/02/18 11:35
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-37
Matrix: Solid
Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	0.77	J	2.2	0.18	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1
PCB-1254	ND		2.2	0.87	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1
PCB-1260	0.46	J	2.2	0.37	ug/Kg	☼	08/09/18 14:01	08/14/18 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*81*		*54 - 142*	*08/09/18 14:01*	*08/14/18 01:30*	*1*
Tetrachloro-m-xylene	*53*	*X*	*58 - 122*	*08/09/18 14:01*	*08/14/18 01:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	410	J B	2000	44	mg/Kg			08/15/18 12:17	1
Total Solids	89.1		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	91	H	0.10	0.10	%			08/15/18 08:12	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	0.0				%			08/09/18 09:26	1
Coarse Sand	0.1				%			08/09/18 09:26	1
Medium Sand	13.4				%			08/09/18 09:26	1
Fine Sand	82.3				%			08/09/18 09:26	1
Silt	2.8				%			08/09/18 09:26	1
Clay	1.4				%			08/09/18 09:26	1

Client Sample ID: PDI-SC-S218-8to10
Date Collected: 08/02/18 11:40
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-38
Matrix: Solid
Percent Solids: 79.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	J B	1.2	0.10	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Acenaphthene	1.8		1.2	0.14	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Acenaphthylene	3.4		1.2	0.12	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Anthracene	1.4		1.2	0.14	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Benzo[a]anthracene	2.2	*	1.2	0.18	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Benzo[a]pyrene	1.9		1.2	0.093	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Benzo[b]fluoranthene	2.3	*	1.2	0.14	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Benzo[g,h,i]perylene	1.9	*	1.2	0.12	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Benzo[k]fluoranthene	0.90	J	1.2	0.14	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Chrysene	2.5		1.2	0.35	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Dibenz(a,h)anthracene	0.33	J *	1.2	0.17	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Fluoranthene	4.4		1.2	0.33	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Fluorene	0.76	J	1.2	0.12	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Indeno[1,2,3-cd]pyrene	1.7	*	1.2	0.14	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Naphthalene	12	B	1.2	0.19	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Phenanthrene	6.5		1.2	0.16	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1
Pyrene	8.0		1.2	0.23	ug/Kg	☼	08/10/18 17:49	08/13/18 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*57 - 120*	*08/10/18 17:49*	*08/13/18 18:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.90	J H B	1.2	0.11	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Acenaphthene	0.90	J H	1.2	0.14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Acenaphthylene	0.94	J H	1.2	0.12	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Anthracene	0.77	J H	1.2	0.14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Benzo[a]anthracene	1.8	H	1.2	0.18	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Benzo[a]pyrene	1.6	H	1.2	0.095	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Benzo[b]fluoranthene	2.0	H	1.2	0.14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Benzo[g,h,i]perylene	2.3	H	1.2	0.12	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Benzo[k]fluoranthene	0.62	J H	1.2	0.14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Chrysene	2.5	H	1.2	0.36	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Dibenz(a,h)anthracene	0.42	J H	1.2	0.17	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Fluoranthene	3.0	H	1.2	0.33	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Fluorene	0.32	J H	1.2	0.12	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Indeno[1,2,3-cd]pyrene	1.4	H	1.2	0.14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Naphthalene	1.8	H B	1.2	0.19	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Phenanthrene	2.7	H	1.2	0.16	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1
Pyrene	5.3	H	1.2	0.23	ug/Kg	☼	08/20/18 12:34	08/21/18 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*98*		*57 - 120*	*08/20/18 12:34*	*08/21/18 20:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.3	0.40	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1
PCB-1221	ND		2.3	1.1	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1
PCB-1232	ND		2.3	0.55	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1
PCB-1242	ND		2.3	0.57	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1

Client Sample ID: PDI-SC-S218-8to10
Date Collected: 08/02/18 11:40
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-38
Matrix: Solid
Percent Solids: 79.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		2.3	0.19	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1
PCB-1254	ND		2.3	0.93	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1
PCB-1260	ND		2.3	0.40	ug/Kg	☼	08/08/18 10:34	08/16/18 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*74*		*54 - 142*	*08/08/18 10:34*	*08/16/18 18:38*	*1*
Tetrachloro-m-xylene	*67*		*58 - 122*	*08/08/18 10:34*	*08/16/18 18:38*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**770**	**J**	2000	44	mg/Kg			08/15/18 10:51	1
Total Solids	**79.6**		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	**81**	**H**	0.10	0.10	%			08/15/18 08:13	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**0.0**				%			08/09/18 09:26	1
Coarse Sand	**0.3**				%			08/09/18 09:26	1
Medium Sand	**12.7**				%			08/09/18 09:26	1
Fine Sand	**81.7**				%			08/09/18 09:26	1
Silt	**3.7**				%			08/09/18 09:26	1
Clay	**1.6**				%			08/09/18 09:26	1

Client Sample ID: PDI-SC-S228-0to2.3

Date Collected: 08/03/18 09:20
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-39

Matrix: Solid
Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	10	J B	12	1.1	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Acenaphthene	3.7	J	12	1.5	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Acenaphthylene	5.6	J	12	1.2	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Anthracene	17		12	1.5	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Benzo[a]anthracene	25	*	12	1.9	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Benzo[a]pyrene	33		12	0.98	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Benzo[b]fluoranthene	48	*	12	1.4	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Benzo[g,h,i]perylene	31	*	12	1.2	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Benzo[k]fluoranthene	16		12	1.5	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Chrysene	30		12	3.7	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Dibenz(a,h)anthracene	6.8	J *	12	1.8	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Fluoranthene	24		12	3.4	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Fluorene	2.6	J	12	1.2	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Indeno[1,2,3-cd]pyrene	34	*	12	1.5	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Naphthalene	8.9	J B	12	2.0	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Phenanthrene	29		12	1.7	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10
Pyrene	50		12	2.4	ug/Kg	☼	08/10/18 17:49	08/13/18 18:35	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*96*		*57 - 120*	*08/10/18 17:49*	*08/13/18 18:35*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND	H	120	11	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Acenaphthene	ND	H	120	14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Acenaphthylene	ND	H	120	12	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Anthracene	16	J H	120	14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Benzo[a]anthracene	19	J H	120	18	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Benzo[a]pyrene	38	J H	120	9.4	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Benzo[b]fluoranthene	ND	H	120	14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Benzo[g,h,i]perylene	20	J H	120	12	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Benzo[k]fluoranthene	ND	H	120	14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Chrysene	56	J H	120	35	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Dibenz(a,h)anthracene	ND	H	120	17	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Fluoranthene	ND	H	120	33	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Fluorene	ND	H	120	12	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Indeno[1,2,3-cd]pyrene	ND	H	120	14	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Naphthalene	ND	H	120	19	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Phenanthrene	46	J H	120	16	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100
Pyrene	67	J H	120	23	ug/Kg	☼	08/20/18 12:34	08/21/18 20:59	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*92*		*57 - 120*	*08/20/18 12:34*	*08/21/18 20:59*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		5.0	0.84	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1
PCB-1221	ND		5.0	2.4	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1
PCB-1232	ND		5.0	1.2	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1
PCB-1242	ND		5.0	1.2	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1

Client Sample ID: PDI-SC-S228-0to2.3 — **Lab Sample ID: 580-79329-39**
Date Collected: 08/03/18 09:20 — **Matrix: Solid**
Date Received: 08/03/18 13:45 — **Percent Solids: 80.3**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		5.0	0.40	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1
PCB-1254	ND		5.0	2.0	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1
PCB-1260	**16**		5.0	0.84	ug/Kg	☼	08/08/18 10:34	08/16/18 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*70*		*54 - 142*	*08/08/18 10:34*	*08/16/18 18:56*	*1*
Tetrachloro-m-xylene	*41*	*X*	*58 - 122*	*08/08/18 10:34*	*08/16/18 18:56*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**3800**		2000	44	mg/Kg			08/15/18 10:56	1
Total Solids	**80.3**		0.1	0.1	%			08/06/18 16:37	1
Total Solids @ 70°C	**85**	**H**	0.10	0.10	%			08/15/18 08:14	1

Method: D7928/D6913 - ASTM D7928/D6913

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**5.9**				%			08/09/18 09:26	1
Coarse Sand	**2.9**				%			08/09/18 09:26	1
Medium Sand	**27.4**				%			08/09/18 09:26	1
Fine Sand	**53.0**				%			08/09/18 09:26	1
Silt	**9.3**				%			08/09/18 09:26	1
Clay	**1.5**				%			08/09/18 09:26	1

Client Sample ID: PDI-RB-SS-180801

Date Collected: 08/01/18 13:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-44

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	*	0.10	0.018	ug/L		08/06/18 09:54	08/13/18 14:30	1
2-Methylnaphthalene	ND	*	0.10	0.020	ug/L		08/06/18 09:54	08/13/18 14:30	1
Acenaphthylene	ND		0.20	0.044	ug/L		08/06/18 09:54	08/13/18 14:30	1
Acenaphthene	ND	*	0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 14:30	1
Fluorene	ND	*	0.10	0.013	ug/L		08/06/18 09:54	08/13/18 14:30	1
Phenanthrene	ND	*	0.10	0.019	ug/L		08/06/18 09:54	08/13/18 14:30	1
Anthracene	ND	*	0.10	0.0070	ug/L		08/06/18 09:54	08/13/18 14:30	1
Fluoranthene	ND	*	0.10	0.013	ug/L		08/06/18 09:54	08/13/18 14:30	1
Pyrene	ND	*	0.10	0.0090	ug/L		08/06/18 09:54	08/13/18 14:30	1
Benzo[a]anthracene	ND	*	0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 14:30	1
Chrysene	ND	*	0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 14:30	1
Benzo[b]fluoranthene	ND	*	0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 14:30	1
Benzo[k]fluoranthene	ND	*	0.10	0.013	ug/L		08/06/18 09:54	08/13/18 14:30	1
Benzo[a]pyrene	ND		0.10	0.035	ug/L		08/06/18 09:54	08/13/18 14:30	1
Indeno[1,2,3-cd]pyrene	ND	*	0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 14:30	1
Dibenz(a,h)anthracene	ND	*	0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 14:30	1
Benzo[g,h,i]perylene	ND		0.20	0.076	ug/L		08/06/18 09:54	08/13/18 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*100*		*54 - 120*	*08/06/18 09:54*	*08/13/18 14:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.47	0.063	ug/L		08/07/18 13:01	08/08/18 19:55	1
PCB-1221	ND		0.47	0.078	ug/L		08/07/18 13:01	08/08/18 19:55	1
PCB-1232	ND		0.47	0.065	ug/L		08/07/18 13:01	08/08/18 19:55	1
PCB-1242	ND		0.47	0.061	ug/L		08/07/18 13:01	08/08/18 19:55	1
PCB-1248	ND		0.47	0.054	ug/L		08/07/18 13:01	08/08/18 19:55	1
PCB-1254	ND		0.47	0.078	ug/L		08/07/18 13:01	08/08/18 19:55	1
PCB-1260	ND		0.47	0.063	ug/L		08/07/18 13:01	08/08/18 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*35*	*X*	*38 - 140*	*08/07/18 13:01*	*08/08/18 19:55*	*1*
Tetrachloro-m-xylene	*75*		*40 - 120*	*08/07/18 13:01*	*08/08/18 19:55*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.19	mg/L			08/09/18 12:29	1

Client Sample ID: PDI-RB-SS-180802-1645

Date Collected: 08/02/18 16:45
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-45

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	*	0.099	0.018	ug/L		08/06/18 09:54	08/13/18 14:52	1
2-Methylnaphthalene	ND	*	0.099	0.020	ug/L		08/06/18 09:54	08/13/18 14:52	1
Acenaphthylene	ND		0.20	0.044	ug/L		08/06/18 09:54	08/13/18 14:52	1
Acenaphthene	ND	*	0.099	0.0060	ug/L		08/06/18 09:54	08/13/18 14:52	1
Fluorene	ND	*	0.099	0.013	ug/L		08/06/18 09:54	08/13/18 14:52	1
Phenanthrene	ND	*	0.099	0.019	ug/L		08/06/18 09:54	08/13/18 14:52	1
Anthracene	ND	*	0.099	0.0070	ug/L		08/06/18 09:54	08/13/18 14:52	1
Fluoranthene	ND	*	0.099	0.013	ug/L		08/06/18 09:54	08/13/18 14:52	1
Pyrene	ND	*	0.099	0.0089	ug/L		08/06/18 09:54	08/13/18 14:52	1
Benzo[a]anthracene	ND	*	0.099	0.0060	ug/L		08/06/18 09:54	08/13/18 14:52	1
Chrysene	ND	*	0.099	0.0060	ug/L		08/06/18 09:54	08/13/18 14:52	1
Benzo[b]fluoranthene	ND	*	0.099	0.0060	ug/L		08/06/18 09:54	08/13/18 14:52	1
Benzo[k]fluoranthene	ND	*	0.099	0.013	ug/L		08/06/18 09:54	08/13/18 14:52	1
Benzo[a]pyrene	ND		0.099	0.035	ug/L		08/06/18 09:54	08/13/18 14:52	1
Indeno[1,2,3-cd]pyrene	ND	*	0.099	0.0060	ug/L		08/06/18 09:54	08/13/18 14:52	1
Dibenz(a,h)anthracene	ND	*	0.099	0.0060	ug/L		08/06/18 09:54	08/13/18 14:52	1
Benzo[g,h,i]perylene	ND		0.20	0.076	ug/L		08/06/18 09:54	08/13/18 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*91*		*54 - 120*	*08/06/18 09:54*	*08/13/18 14:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.44	0.060	ug/L		08/07/18 13:01	08/08/18 20:13	1
PCB-1221	ND		0.44	0.073	ug/L		08/07/18 13:01	08/08/18 20:13	1
PCB-1232	ND		0.44	0.062	ug/L		08/07/18 13:01	08/08/18 20:13	1
PCB-1242	ND		0.44	0.058	ug/L		08/07/18 13:01	08/08/18 20:13	1
PCB-1248	ND		0.44	0.051	ug/L		08/07/18 13:01	08/08/18 20:13	1
PCB-1254	ND		0.44	0.073	ug/L		08/07/18 13:01	08/08/18 20:13	1
PCB-1260	ND		0.44	0.060	ug/L		08/07/18 13:01	08/08/18 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*31*	*X*	*38 - 140*	*08/07/18 13:01*	*08/08/18 20:13*	*1*
Tetrachloro-m-xylene	*70*		*40 - 120*	*08/07/18 13:01*	*08/08/18 20:13*	*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			08/09/18 12:29	1

Client Sample ID: PDI-RB-SS-180802

Date Collected: 08/02/18 09:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-46

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		08/06/18 09:54	08/13/18 15:14	1
2-Methylnaphthalene	ND	*	0.098	0.020	ug/L		08/06/18 09:54	08/13/18 15:14	1
Acenaphthylene	ND		0.20	0.043	ug/L		08/06/18 09:54	08/13/18 15:14	1
Acenaphthene	ND	*	0.098	0.0059	ug/L		08/06/18 09:54	08/13/18 15:14	1
Fluorene	ND	*	0.098	0.013	ug/L		08/06/18 09:54	08/13/18 15:14	1
Phenanthrene	ND	*	0.098	0.019	ug/L		08/06/18 09:54	08/13/18 15:14	1
Anthracene	ND	*	0.098	0.0068	ug/L		08/06/18 09:54	08/13/18 15:14	1
Fluoranthene	**0.018**	**J ***	0.098	0.013	ug/L		08/06/18 09:54	08/13/18 15:14	1
Pyrene	**0.019**	**J ***	0.098	0.0088	ug/L		08/06/18 09:54	08/13/18 15:14	1
Benzo[a]anthracene	ND	*	0.098	0.0059	ug/L		08/06/18 09:54	08/13/18 15:14	1
Chrysene	**0.0079**	**J ***	0.098	0.0059	ug/L		08/06/18 09:54	08/13/18 15:14	1
Benzo[b]fluoranthene	ND	*	0.098	0.0059	ug/L		08/06/18 09:54	08/13/18 15:14	1
Benzo[k]fluoranthene	ND	*	0.098	0.013	ug/L		08/06/18 09:54	08/13/18 15:14	1
Benzo[a]pyrene	ND		0.098	0.034	ug/L		08/06/18 09:54	08/13/18 15:14	1
Indeno[1,2,3-cd]pyrene	ND	*	0.098	0.0059	ug/L		08/06/18 09:54	08/13/18 15:14	1
Dibenz(a,h)anthracene	ND	*	0.098	0.0059	ug/L		08/06/18 09:54	08/13/18 15:14	1
Benzo[g,h,i]perylene	ND		0.20	0.074	ug/L		08/06/18 09:54	08/13/18 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*93*		*54 - 120*	*08/06/18 09:54*	*08/13/18 15:14*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.44	0.060	ug/L		08/07/18 13:01	08/08/18 20:30	1
PCB-1221	ND		0.44	0.074	ug/L		08/07/18 13:01	08/08/18 20:30	1
PCB-1232	ND		0.44	0.062	ug/L		08/07/18 13:01	08/08/18 20:30	1
PCB-1242	ND		0.44	0.058	ug/L		08/07/18 13:01	08/08/18 20:30	1
PCB-1248	ND		0.44	0.051	ug/L		08/07/18 13:01	08/08/18 20:30	1
PCB-1254	ND		0.44	0.074	ug/L		08/07/18 13:01	08/08/18 20:30	1
PCB-1260	ND		0.44	0.060	ug/L		08/07/18 13:01	08/08/18 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*34*	*X*	*38 - 140*	*08/07/18 13:01*	*08/08/18 20:30*	*1*
Tetrachloro-m-xylene	*76*		*40 - 120*	*08/07/18 13:01*	*08/08/18 20:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**0.24**	**J**	1.0	0.19	mg/L			08/09/18 12:29	1

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

Lab Sample ID: MB 580-280882/1-A
Matrix: Water
Analysis Batch: 281414

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280882

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.10	0.020	ug/L		08/06/18 09:54	08/13/18 11:46	1
Acenaphthylene	ND		0.20	0.044	ug/L		08/06/18 09:54	08/13/18 11:46	1
Acenaphthene	ND		0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 11:46	1
Anthracene	ND		0.10	0.0070	ug/L		08/06/18 09:54	08/13/18 11:46	1
Benzo[a]anthracene	ND		0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 11:46	1
Chrysene	ND		0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 11:46	1
Fluoranthene	ND		0.10	0.013	ug/L		08/06/18 09:54	08/13/18 11:46	1
Benzo[b]fluoranthene	ND		0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 11:46	1
Fluorene	ND		0.10	0.013	ug/L		08/06/18 09:54	08/13/18 11:46	1
Benzo[k]fluoranthene	ND		0.10	0.013	ug/L		08/06/18 09:54	08/13/18 11:46	1
Benzo[a]pyrene	ND		0.10	0.035	ug/L		08/06/18 09:54	08/13/18 11:46	1
Naphthalene	ND		0.10	0.018	ug/L		08/06/18 09:54	08/13/18 11:46	1
Indeno[1,2,3-cd]pyrene	ND		0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 11:46	1
Phenanthrene	ND		0.10	0.019	ug/L		08/06/18 09:54	08/13/18 11:46	1
Dibenz(a,h)anthracene	ND		0.10	0.0060	ug/L		08/06/18 09:54	08/13/18 11:46	1
Pyrene	ND		0.10	0.0090	ug/L		08/06/18 09:54	08/13/18 11:46	1
Benzo[g,h,i]perylene	ND		0.20	0.076	ug/L		08/06/18 09:54	08/13/18 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*85*		*54 - 120*	*08/06/18 09:54*	*08/13/18 11:46*	*1*

Lab Sample ID: LCS 580-280882/2-A
Matrix: Water
Analysis Batch: 281414

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280882

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	2.00	1.63		ug/L		82	53 - 120
Acenaphthylene	2.00	1.70		ug/L		85	33 - 130
Acenaphthene	2.00	1.72		ug/L		86	64 - 120
Anthracene	2.00	1.62		ug/L		81	46 - 127
Benzo[a]anthracene	2.00	1.89		ug/L		95	70 - 120
Chrysene	2.00	2.06		ug/L		103	65 - 120
Fluoranthene	2.00	1.80		ug/L		90	72 - 120
Benzo[b]fluoranthene	2.00	1.99		ug/L		100	57 - 132
Fluorene	2.00	1.79		ug/L		90	67 - 120
Benzo[k]fluoranthene	2.00	2.26		ug/L		113	61 - 132
Benzo[a]pyrene	2.00	1.99		ug/L		100	23 - 141
Naphthalene	2.00	1.62		ug/L		81	58 - 120
Indeno[1,2,3-cd]pyrene	2.00	2.31		ug/L		115	53 - 133
Phenanthrene	2.00	1.69		ug/L		85	69 - 120
Dibenz(a,h)anthracene	2.00	2.26		ug/L		113	57 - 132
Pyrene	2.00	1.78		ug/L		89	57 - 133
Benzo[g,h,i]perylene	2.00	2.01		ug/L		101	52 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*85*		*54 - 120*

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

Lab Sample ID: LCSD 580-280882/3-A
Matrix: Water
Analysis Batch: 281414

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 280882

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene			2.00	2.12	*	ug/L		106	53 - 120	26	23
Acenaphthylene			2.00	2.28		ug/L		114	33 - 130	29	34
Acenaphthene			2.00	2.32	*	ug/L		116	64 - 120	29	20
Anthracene			2.00	2.16	*	ug/L		108	46 - 127	29	19
Benzo[a]anthracene			2.00	2.39	*	ug/L		119	70 - 120	23	17
Chrysene			2.00	2.79	*	ug/L		139	65 - 120	30	19
Fluoranthene			2.00	2.36	*	ug/L		118	72 - 120	27	21
Benzo[b]fluoranthene			2.00	2.72	*	ug/L		136	57 - 132	31	25
Fluorene			2.00	2.38	*	ug/L		119	67 - 120	28	20
Benzo[k]fluoranthene			2.00	2.90	*	ug/L		145	61 - 132	25	22
Benzo[a]pyrene			2.00	2.63		ug/L		131	23 - 141	28	35
Naphthalene			2.00	2.11	*	ug/L		105	58 - 120	26	23
Indeno[1,2,3-cd]pyrene			2.00	3.02	*	ug/L		151	53 - 133	27	25
Phenanthrene			2.00	2.22	*	ug/L		111	69 - 120	27	21
Dibenz(a,h)anthracene			2.00	2.86	*	ug/L		143	57 - 132	23	24
Pyrene			2.00	2.32	*	ug/L		116	57 - 133	26	21
Benzo[g,h,i]perylene			2.00	2.53		ug/L		126	52 - 129	23	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Terphenyl-d14	*110*		*54 - 120*

Lab Sample ID: MB 580-280938/1-A
Matrix: Solid
Analysis Batch: 281139

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 280938

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.152	J	1.0	0.090	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Acenaphthylene	ND		1.0	0.10	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Acenaphthene	ND		1.0	0.12	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Anthracene	ND		1.0	0.12	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Benzo[a]anthracene	0.309	J	1.0	0.15	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Chrysene	0.385	J	1.0	0.30	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Fluoranthene	0.389	J	1.0	0.28	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Benzo[b]fluoranthene	0.375	J	1.0	0.12	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Fluorene	ND		1.0	0.10	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Benzo[k]fluoranthene	0.308	J	1.0	0.12	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Benzo[a]pyrene	0.314	J	1.0	0.080	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Naphthalene	0.299	J	1.0	0.16	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Indeno[1,2,3-cd]pyrene	0.308	J	1.0	0.12	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Phenanthrene	0.299	J	1.0	0.14	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Dibenz(a,h)anthracene	0.240	J	1.0	0.14	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Pyrene	0.445	J	1.0	0.19	ug/Kg		08/06/18 17:18	08/08/18 11:41	1
Benzo[g,h,i]perylene	0.309	J	1.0	0.10	ug/Kg		08/06/18 17:18	08/08/18 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*106*		*57 - 120*	*08/06/18 17:18*	*08/08/18 11:41*	*1*

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

Lab Sample ID: LCS 580-280938/2-A
Matrix: Solid
Analysis Batch: 281139

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 280938

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	199		ug/Kg		100	68 - 120
Acenaphthylene	200	179		ug/Kg		89	68 - 120
Acenaphthene	200	189		ug/Kg		94	68 - 120
Anthracene	200	206		ug/Kg		103	73 - 125
Benzo[a]anthracene	200	208		ug/Kg		104	66 - 120
Chrysene	200	196		ug/Kg		98	69 - 120
Fluoranthene	200	208		ug/Kg		104	74 - 125
Benzo[b]fluoranthene	200	203		ug/Kg		101	63 - 121
Fluorene	200	198		ug/Kg		99	73 - 120
Benzo[k]fluoranthene	200	225		ug/Kg		113	63 - 123
Benzo[a]pyrene	200	202		ug/Kg		101	72 - 124
Naphthalene	200	175		ug/Kg		87	70 - 120
Indeno[1,2,3-cd]pyrene	200	204		ug/Kg		102	65 - 121
Phenanthrene	200	191		ug/Kg		95	73 - 120
Dibenz(a,h)anthracene	200	221		ug/Kg		110	70 - 125
Pyrene	200	204		ug/Kg		102	70 - 120
Benzo[g,h,i]perylene	200	224		ug/Kg		112	63 - 120

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

Lab Sample ID: 580-79329-7 MS
Matrix: Solid
Analysis Batch: 281139

Client Sample ID: PDI-SC-S086-0to2
Prep Type: Total/NA
Prep Batch: 280938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	280	F2 F1 B	237	757	F1	ug/Kg	☼	202	68 - 120
Acenaphthylene	1800	F2	237	2930	4	ug/Kg	☼	494	68 - 120
Acenaphthene	8800	F2	237	24200	4	ug/Kg	☼	6518	68 - 120
Anthracene	10000	F2	237	22400	4	ug/Kg	☼	5204	73 - 125
Benzo[a]anthracene	11000	F2 B	237	21800	4	ug/Kg	☼	4409	66 - 120
Chrysene	12000	F2 B	237	20900	4	ug/Kg	☼	3563	69 - 120
Fluoranthene	37000	F2 B	237	73100	E 4	ug/Kg	☼	15251	74 - 125
Benzo[b]fluoranthene	12000	F2 B	237	22500	4	ug/Kg	☼	4432	63 - 121
Fluorene	5000	F2	237	14200	4	ug/Kg	☼	3856	73 - 120
Benzo[k]fluoranthene	3000	F2 B	237	5670	4	ug/Kg	☼	1110	63 - 123
Benzo[a]pyrene	12000	F2 B	237	22300	4	ug/Kg	☼	4386	72 - 124
Naphthalene	420	F2 F1 B	237	1360	F1	ug/Kg	☼	396	70 - 120
Indeno[1,2,3-cd]pyrene	9200	F2 B	237	16800	4	ug/Kg	☼	3233	65 - 121
Phenanthrene	39000	F2 B	237	88500	E 4	ug/Kg	☼	20912	73 - 120
Dibenz(a,h)anthracene	1300	F2 B	237	2780	4	ug/Kg	☼	619	70 - 125
Pyrene	46000	F2 B	237	88300	E 4	ug/Kg	☼	17700	70 - 120
Benzo[g,h,i]perylene	11000	F2 B	237	19900	4	ug/Kg	☼	3852	63 - 120

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

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

Lab Sample ID: 580-79329-7 MSD
Matrix: Solid
Analysis Batch: 281139

Client Sample ID: PDI-SC-S086-0to2
Prep Type: Total/NA
Prep Batch: 280938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	280	F2 F1 B	226	1080	F1 F2	ug/Kg	☼	354	68 - 120	35	12
Acenaphthylene	1800	F2	226	2210	4 F2	ug/Kg	☼	201	68 - 120	28	12
Acenaphthene	8800	F2	226	14900	4 F2	ug/Kg	☼	2707	68 - 120	48	12
Anthracene	10000	F2	226	13500	4 F2	ug/Kg	☼	1496	73 - 125	50	12
Benzo[a]anthracene	11000	F2 B	226	13900	4 F2	ug/Kg	☼	1133	66 - 120	44	14
Chrysene	12000	F2 B	226	13900	4 F2	ug/Kg	☼	632	69 - 120	40	10
Fluoranthene	37000	F2 B	226	48000	4 F2	ug/Kg	☼	4902	74 - 125	41	13
Benzo[b]fluoranthene	12000	F2 B	226	14900	4 F2	ug/Kg	☼	1282	63 - 121	41	10
Fluorene	5000	F2	226	8870	4 F2	ug/Kg	☼	1704	73 - 120	46	13
Benzo[k]fluoranthene	3000	F2 B	226	3900	4 F2	ug/Kg	☼	379	63 - 123	37	15
Benzo[a]pyrene	12000	F2 B	226	14800	4 F2	ug/Kg	☼	1283	72 - 124	40	12
Naphthalene	420	F2 F1 B	226	864	F1 F2	ug/Kg	☼	196	70 - 120	45	12
Indeno[1,2,3-cd]pyrene	9200	F2 B	226	11800	4 F2	ug/Kg	☼	1176	65 - 121	35	15
Phenanthrene	39000	F2 B	226	63500	E 4 F2	ug/Kg	☼	10866	73 - 120	33	11
Dibenz(a,h)anthracene	1300	F2 B	226	1860	4 F2	ug/Kg	☼	241	70 - 125	40	13
Pyrene	46000	F2 B	226	59600	E 4 F2	ug/Kg	☼	5849	70 - 120	39	12
Benzo[g,h,i]perylene	11000	F2 B	226	13400	4 F2	ug/Kg	☼	1175	63 - 120	39	14

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*103*		*57 - 120*

Lab Sample ID: MB 580-281014/1-A
Matrix: Solid
Analysis Batch: 281256

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281014

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.341	J	1.0	0.090	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Acenaphthylene	0.330	J	1.0	0.10	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Acenaphthene	0.218	J	1.0	0.12	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Anthracene	0.165	J	1.0	0.12	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Benzo[a]anthracene	ND		1.0	0.15	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Chrysene	ND		1.0	0.30	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Fluoranthene	0.394	J	1.0	0.28	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Benzo[b]fluoranthene	ND		1.0	0.12	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Fluorene	0.119	J	1.0	0.10	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Benzo[k]fluoranthene	ND		1.0	0.12	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Benzo[a]pyrene	ND		1.0	0.080	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Naphthalene	0.313	J	1.0	0.16	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.12	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Phenanthrene	0.672	J	1.0	0.14	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Dibenz(a,h)anthracene	ND		1.0	0.14	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Pyrene	0.403	J	1.0	0.19	ug/Kg		08/07/18 11:50	08/09/18 17:47	1
Benzo[g,h,i]perylene	ND		1.0	0.10	ug/Kg		08/07/18 11:50	08/09/18 17:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*110*		*57 - 120*	*08/07/18 11:50*	*08/09/18 17:47*	*1*

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

Lab Sample ID: LCS 580-281014/2-A
Matrix: Solid
Analysis Batch: 281256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	217		ug/Kg		109	68 - 120
Acenaphthylene	200	192		ug/Kg		96	68 - 120
Acenaphthene	200	200		ug/Kg		100	68 - 120
Anthracene	200	211		ug/Kg		105	73 - 125
Benzo[a]anthracene	200	204		ug/Kg		102	66 - 120
Chrysene	200	195		ug/Kg		97	69 - 120
Fluoranthene	200	206		ug/Kg		103	74 - 125
Benzo[b]fluoranthene	200	202		ug/Kg		101	63 - 121
Fluorene	200	211		ug/Kg		105	73 - 120
Benzo[k]fluoranthene	200	217		ug/Kg		109	63 - 123
Benzo[a]pyrene	200	199		ug/Kg		100	72 - 124
Naphthalene	200	189		ug/Kg		95	70 - 120
Indeno[1,2,3-cd]pyrene	200	204		ug/Kg		102	65 - 121
Phenanthrene	200	194		ug/Kg		97	73 - 120
Dibenz(a,h)anthracene	200	219		ug/Kg		109	70 - 125
Pyrene	200	202		ug/Kg		101	70 - 120
Benzo[g,h,i]perylene	200	219		ug/Kg		110	63 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*91*		*57 - 120*

Lab Sample ID: MB 580-281134/1-A
Matrix: Solid
Analysis Batch: 281321

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281134

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.161	J	1.0	0.090	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Acenaphthylene	ND		1.0	0.10	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Acenaphthene	ND		1.0	0.12	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Anthracene	0.147	J	1.0	0.12	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Benzo[a]anthracene	0.325	J	1.0	0.15	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Chrysene	ND		1.0	0.30	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Fluoranthene	ND		1.0	0.28	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Benzo[b]fluoranthene	0.129	J	1.0	0.12	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Fluorene	ND		1.0	0.10	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Benzo[k]fluoranthene	0.195	J	1.0	0.12	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Benzo[a]pyrene	ND		1.0	0.080	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Naphthalene	ND		1.0	0.16	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.12	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Phenanthrene	0.298	J	1.0	0.14	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Dibenz(a,h)anthracene	ND		1.0	0.14	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Pyrene	ND		1.0	0.19	ug/Kg		08/08/18 11:34	08/10/18 13:10	1
Benzo[g,h,i]perylene	ND		1.0	0.10	ug/Kg		08/08/18 11:34	08/10/18 13:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*106*		*57 - 120*	*08/08/18 11:34*	*08/10/18 13:10*	*1*

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

Lab Sample ID: LCS 580-281134/2-A
Matrix: Solid
Analysis Batch: 281321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	177		ug/Kg		89	68 - 120
Acenaphthylene	200	178		ug/Kg		89	68 - 120
Acenaphthene	200	182		ug/Kg		91	68 - 120
Anthracene	200	174		ug/Kg		87	73 - 125
Benzo[a]anthracene	200	190		ug/Kg		95	66 - 120
Chrysene	200	219		ug/Kg		109	69 - 120
Fluoranthene	200	181		ug/Kg		91	74 - 125
Benzo[b]fluoranthene	200	195		ug/Kg		97	63 - 121
Fluorene	200	184		ug/Kg		92	73 - 120
Benzo[k]fluoranthene	200	225		ug/Kg		112	63 - 123
Benzo[a]pyrene	200	215		ug/Kg		108	72 - 124
Naphthalene	200	170		ug/Kg		85	70 - 120
Indeno[1,2,3-cd]pyrene	200	217		ug/Kg		108	65 - 121
Phenanthrene	200	170		ug/Kg		85	73 - 120
Dibenz(a,h)anthracene	200	218		ug/Kg		109	70 - 125
Pyrene	200	179		ug/Kg		90	70 - 120
Benzo[g,h,i]perylene	200	196		ug/Kg		98	63 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*87*		*57 - 120*

Lab Sample ID: 580-79329-33 MS
Matrix: Solid
Analysis Batch: 281321

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA
Prep Batch: 281134

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	0.67	J B	264	228		ug/Kg	☼	86	68 - 120
Acenaphthene	1.4		264	232		ug/Kg	☼	87	68 - 120
Acenaphthylene	0.35	J	264	224		ug/Kg	☼	85	68 - 120
Anthracene	1.3	B	264	234		ug/Kg	☼	88	73 - 125
Benzo[a]anthracene	2.9	B F2	264	192		ug/Kg	☼	72	66 - 120
Benzo[a]pyrene	2.3		264	237		ug/Kg	☼	89	72 - 124
Benzo[b]fluoranthene	4.2	B F2	264	235		ug/Kg	☼	88	63 - 121
Benzo[g,h,i]perylene	2.5		264	211		ug/Kg	☼	79	63 - 120
Benzo[k]fluoranthene	1.5	B	264	231		ug/Kg	☼	87	63 - 123
Chrysene	3.5	F2	264	197		ug/Kg	☼	73	69 - 120
Dibenz(a,h)anthracene	0.64	J	264	244		ug/Kg	☼	93	70 - 125
Fluoranthene	13		264	243		ug/Kg	☼	88	74 - 125
Fluorene	0.88	J	264	231		ug/Kg	☼	87	73 - 120
Indeno[1,2,3-cd]pyrene	2.5		264	258		ug/Kg	☼	97	65 - 121
Naphthalene	1.1	J	264	216		ug/Kg	☼	81	70 - 120
Phenanthrene	14	B	264	238		ug/Kg	☼	85	73 - 120
Pyrene	14		264	251		ug/Kg	☼	90	70 - 120

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

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

Lab Sample ID: 580-79329-33 MSD
Matrix: Solid
Analysis Batch: 281321

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA
Prep Batch: 281134

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	0.67	J B	274	236		ug/Kg	☼	86	68 - 120	3	12
Acenaphthene	1.4		274	238		ug/Kg	☼	87	68 - 120	3	12
Acenaphthylene	0.35	J	274	233		ug/Kg	☼	85	68 - 120	4	12
Anthracene	1.3	B	274	242		ug/Kg	☼	88	73 - 125	4	12
Benzo[a]anthracene	2.9	B F2	274	232	F2	ug/Kg	☼	84	66 - 120	19	14
Benzo[a]pyrene	2.3		274	266		ug/Kg	☼	96	72 - 124	12	12
Benzo[b]fluoranthene	4.2	B F2	274	266	F2	ug/Kg	☼	96	63 - 121	12	10
Benzo[g,h,i]perylene	2.5		274	238		ug/Kg	☼	86	63 - 120	12	14
Benzo[k]fluoranthene	1.5	B	274	256		ug/Kg	☼	93	63 - 123	10	15
Chrysene	3.5	F2	274	236	F2	ug/Kg	☼	85	69 - 120	18	10
Dibenz(a,h)anthracene	0.64	J	274	273		ug/Kg	☼	100	70 - 125	11	13
Fluoranthene	13		274	253		ug/Kg	☼	88	74 - 125	4	13
Fluorene	0.88	J	274	239		ug/Kg	☼	87	73 - 120	3	13
Indeno[1,2,3-cd]pyrene	2.5		274	290		ug/Kg	☼	105	65 - 121	12	15
Naphthalene	1.1	J	274	225		ug/Kg	☼	82	70 - 120	4	12
Phenanthrene	14	B	274	250		ug/Kg	☼	86	73 - 120	5	11
Pyrene	14		274	262		ug/Kg	☼	91	70 - 120	4	12

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*85*		*57 - 120*

Lab Sample ID: MB 580-281359/1-A
Matrix: Solid
Analysis Batch: 282198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281359

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.723	J	1.0	0.090	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Acenaphthylene	ND		1.0	0.10	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Acenaphthene	ND		1.0	0.12	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Anthracene	ND		1.0	0.12	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Benzo[a]anthracene	ND		1.0	0.15	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Chrysene	ND		1.0	0.30	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Fluoranthene	ND		1.0	0.28	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Benzo[b]fluoranthene	ND		1.0	0.12	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Fluorene	ND		1.0	0.10	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Benzo[k]fluoranthene	ND		1.0	0.12	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Benzo[a]pyrene	ND		1.0	0.080	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Naphthalene	0.297	J	1.0	0.16	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Indeno[1,2,3-cd]pyrene	ND		1.0	0.12	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Phenanthrene	ND		1.0	0.14	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Dibenz(a,h)anthracene	ND		1.0	0.14	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Pyrene	ND		1.0	0.19	ug/Kg		08/10/18 17:49	08/22/18 19:45	1
Benzo[g,h,i]perylene	ND		1.0	0.10	ug/Kg		08/10/18 17:49	08/22/18 19:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*80*		*57 - 120*	*08/10/18 17:49*	*08/22/18 19:45*	*1*

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

Lab Sample ID: LCS 580-281359/2-A
Matrix: Solid
Analysis Batch: 281430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281359

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	200	240		ug/Kg		120	68 - 120
Acenaphthylene	200	220		ug/Kg		110	68 - 120
Acenaphthene	200	233		ug/Kg		116	68 - 120
Anthracene	200	238		ug/Kg		119	73 - 125
Benzo[a]anthracene	200	245	*	ug/Kg		123	66 - 120
Chrysene	200	225		ug/Kg		112	69 - 120
Fluoranthene	200	242		ug/Kg		121	74 - 125
Benzo[b]fluoranthene	200	250	*	ug/Kg		125	63 - 121
Fluorene	200	240		ug/Kg		120	73 - 120
Benzo[k]fluoranthene	200	244		ug/Kg		122	63 - 123
Benzo[a]pyrene	200	224		ug/Kg		112	72 - 124
Naphthalene	200	210		ug/Kg		105	70 - 120
Indeno[1,2,3-cd]pyrene	200	255	*	ug/Kg		127	65 - 121
Phenanthrene	200	227		ug/Kg		113	73 - 120
Dibenz(a,h)anthracene	200	261	*	ug/Kg		131	70 - 125
Pyrene	200	235		ug/Kg		118	70 - 120
Benzo[g,h,i]perylene	200	257	*	ug/Kg		128	63 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14	*100*		*57 - 120*

Lab Sample ID: 580-79329-37 MS
Matrix: Solid
Analysis Batch: 281430

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281359

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene	1.6	B	221	252		ug/Kg	☼	113	68 - 120
Acenaphthene	0.58	J	221	243		ug/Kg	☼	110	68 - 120
Acenaphthylene	0.76	J	221	230		ug/Kg	☼	104	68 - 120
Anthracene	0.72	J	221	269		ug/Kg	☼	121	73 - 125
Benzo[a]anthracene	2.4	F1 *	221	275	F1	ug/Kg	☼	123	66 - 120
Benzo[a]pyrene	2.2		221	237		ug/Kg	☼	106	72 - 124
Benzo[b]fluoranthene	2.4	*	221	262		ug/Kg	☼	117	63 - 121
Benzo[g,h,i]perylene	2.2	*	221	264		ug/Kg	☼	118	63 - 120
Benzo[k]fluoranthene	1.4		221	239		ug/Kg	☼	107	63 - 123
Chrysene	2.7		221	237		ug/Kg	☼	106	69 - 120
Dibenz(a,h)anthracene	0.44	J *	221	259		ug/Kg	☼	117	70 - 125
Fluoranthene	3.2		221	265		ug/Kg	☼	118	74 - 125
Fluorene	1.1		221	254		ug/Kg	☼	114	73 - 120
Indeno[1,2,3-cd]pyrene	2.4	*	221	260		ug/Kg	☼	116	65 - 121
Naphthalene	1.3	B	221	223		ug/Kg	☼	100	70 - 120
Phenanthrene	3.9		221	247		ug/Kg	☼	110	73 - 120
Pyrene	5.5		221	262		ug/Kg	☼	116	70 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14	*93*		*57 - 120*

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

Lab Sample ID: 580-79329-37 MSD
Matrix: Solid
Analysis Batch: 281430

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281359

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	1.6	B	224	247		ug/Kg	☼	110	68 - 120	2	12
Acenaphthene	0.58	J	224	240		ug/Kg	☼	107	68 - 120	1	12
Acenaphthylene	0.76	J	224	230		ug/Kg	☼	103	68 - 120	0	12
Anthracene	0.72	J	224	258		ug/Kg	☼	115	73 - 125	4	12
Benzo[a]anthracene	2.4	F1 *	224	270		ug/Kg	☼	120	66 - 120	2	14
Benzo[a]pyrene	2.2		224	226		ug/Kg	☼	100	72 - 124	5	12
Benzo[b]fluoranthene	2.4	*	224	244		ug/Kg	☼	108	63 - 121	7	10
Benzo[g,h,i]perylene	2.2	*	224	255		ug/Kg	☼	113	63 - 120	4	14
Benzo[k]fluoranthene	1.4		224	231		ug/Kg	☼	102	63 - 123	3	15
Chrysene	2.7		224	233		ug/Kg	☼	103	69 - 120	2	10
Dibenz(a,h)anthracene	0.44	J *	224	255		ug/Kg	☼	114	70 - 125	2	13
Fluoranthene	3.2		224	253		ug/Kg	☼	112	74 - 125	5	13
Fluorene	1.1		224	251		ug/Kg	☼	112	73 - 120	1	13
Indeno[1,2,3-cd]pyrene	2.4	*	224	257		ug/Kg	☼	114	65 - 121	1	15
Naphthalene	1.3	B	224	217		ug/Kg	☼	96	70 - 120	3	12
Phenanthrene	3.9		224	239		ug/Kg	☼	105	73 - 120	3	11
Pyrene	5.5		224	253		ug/Kg	☼	111	70 - 120	4	12

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14	*92*		*57 - 120*

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

Lab Sample ID: MB 580-281984/1-A
Matrix: Solid
Analysis Batch: 282110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene - RE	0.174	J	1.0	0.090	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Acenaphthylene - RE	ND		1.0	0.10	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Acenaphthene - RE	ND		1.0	0.12	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Anthracene - RE	ND		1.0	0.12	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Benzo[a]anthracene - RE	ND		1.0	0.15	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Chrysene - RE	ND		1.0	0.30	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Fluoranthene - RE	ND		1.0	0.28	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Benzo[b]fluoranthene - RE	ND		1.0	0.12	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Fluorene - RE	ND		1.0	0.10	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Benzo[k]fluoranthene - RE	ND		1.0	0.12	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Benzo[a]pyrene - RE	ND		1.0	0.080	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Naphthalene - RE	0.358	J	1.0	0.16	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Indeno[1,2,3-cd]pyrene - RE	ND		1.0	0.12	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Phenanthrene - RE	ND		1.0	0.14	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Dibenz(a,h)anthracene - RE	ND		1.0	0.14	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Pyrene - RE	ND		1.0	0.19	ug/Kg		08/20/18 12:34	08/21/18 17:58	1
Benzo[g,h,i]perylene - RE	ND		1.0	0.10	ug/Kg		08/20/18 12:34	08/21/18 17:58	1

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

Lab Sample ID: MB 580-281984/1-A
Matrix: Solid
Analysis Batch: 282110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281984

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 - RE	112		57 - 120	08/20/18 12:34	08/21/18 17:58	1

Lab Sample ID: LCS 580-281984/2-A
Matrix: Solid
Analysis Batch: 282110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene - RE	200	211		ug/Kg		105	68 - 120
Acenaphthylene - RE	200	189		ug/Kg		94	68 - 120
Acenaphthene - RE	200	199		ug/Kg		100	68 - 120
Anthracene - RE	200	210		ug/Kg		105	73 - 125
Benzo[a]anthracene - RE	200	213		ug/Kg		107	66 - 120
Chrysene - RE	200	190		ug/Kg		95	69 - 120
Fluoranthene - RE	200	218		ug/Kg		109	74 - 125
Benzo[b]fluoranthene - RE	200	208		ug/Kg		104	63 - 121
Fluorene - RE	200	207		ug/Kg		103	73 - 120
Benzo[k]fluoranthene - RE	200	212		ug/Kg		106	63 - 123
Benzo[a]pyrene - RE	200	201		ug/Kg		100	72 - 124
Naphthalene - RE	200	190		ug/Kg		95	70 - 120
Indeno[1,2,3-cd]pyrene - RE	200	201		ug/Kg		101	65 - 121
Phenanthrene - RE	200	192		ug/Kg		96	73 - 120
Dibenz(a,h)anthracene - RE	200	207		ug/Kg		104	70 - 125
Pyrene - RE	200	212		ug/Kg		106	70 - 120
Benzo[g,h,i]perylene - RE	200	208		ug/Kg		104	63 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14 - RE	101		57 - 120

Lab Sample ID: 580-79329-37 MS
Matrix: Solid
Analysis Batch: 282110

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281984

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Methylnaphthalene - RE	0.93	J H B	211	199	H	ug/Kg	☼	94	68 - 120
Acenaphthene - RE	1.2	H	211	181	H	ug/Kg	☼	85	68 - 120
Acenaphthylene - RE	0.89	J H	211	173	H	ug/Kg	☼	81	68 - 120
Anthracene - RE	1.3	H	211	200	H	ug/Kg	☼	94	73 - 125
Benzo[a]anthracene - RE	1.7	H	211	203	H	ug/Kg	☼	95	66 - 120
Benzo[a]pyrene - RE	1.5	H	211	171	H	ug/Kg	☼	80	72 - 124
Benzo[b]fluoranthene - RE	2.0	H F2	211	176	H	ug/Kg	☼	82	63 - 121
Benzo[g,h,i]perylene - RE	2.4	H	211	174	H	ug/Kg	☼	81	63 - 120
Benzo[k]fluoranthene - RE	0.60	J H	211	181	H	ug/Kg	☼	85	63 - 123
Chrysene - RE	2.2	H F2	211	172	H	ug/Kg	☼	80	69 - 120
Dibenz(a,h)anthracene - RE	0.33	J H	211	178	H	ug/Kg	☼	84	70 - 125
Fluoranthene - RE	3.1	H	211	201	H	ug/Kg	☼	94	74 - 125
Fluorene - RE	0.49	J H	211	191	H	ug/Kg	☼	90	73 - 120
Indeno[1,2,3-cd]pyrene - RE	1.5	H	211	170	H	ug/Kg	☼	80	65 - 121
Naphthalene - RE	1.8	H B	211	171	H	ug/Kg	☼	80	70 - 120

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

Lab Sample ID: 580-79329-37 MS
Matrix: Solid
Analysis Batch: 282110

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281984

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenanthrene - RE	4.1	H	211	182	H	ug/Kg	☼	84	73 - 120
Pyrene - RE	5.5	H	211	203	H	ug/Kg	☼	94	70 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14 - RE	*87*		*57 - 120*

Lab Sample ID: 580-79329-37 MSD
Matrix: Solid
Analysis Batch: 282110

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene - RE	0.93	J H B	218	216	H	ug/Kg	☼	98	68 - 120	8	12
Acenaphthene - RE	1.2	H	218	201	H	ug/Kg	☼	91	68 - 120	10	12
Acenaphthylene - RE	0.89	J H	218	193	H	ug/Kg	☼	88	68 - 120	11	12
Anthracene - RE	1.3	H	218	220	H	ug/Kg	☼	100	73 - 125	10	12
Benzo[a]anthracene - RE	1.7	H	218	233	H	ug/Kg	☼	106	66 - 120	14	14
Benzo[a]pyrene - RE	1.5	H	218	193	H	ug/Kg	☼	87	72 - 124	12	12
Benzo[b]fluoranthene - RE	2.0	H F2	218	203	H F2	ug/Kg	☼	92	63 - 121	14	10
Benzo[g,h,i]perylene - RE	2.4	H	218	194	H	ug/Kg	☼	88	63 - 120	11	14
Benzo[k]fluoranthene - RE	0.60	J H	218	201	H	ug/Kg	☼	92	63 - 123	10	15
Chrysene - RE	2.2	H F2	218	198	H F2	ug/Kg	☼	90	69 - 120	14	10
Dibenz(a,h)anthracene - RE	0.33	J H	218	196	H	ug/Kg	☼	90	70 - 125	10	13
Fluoranthene - RE	3.1	H	218	224	H	ug/Kg	☼	101	74 - 125	11	13
Fluorene - RE	0.49	J H	218	211	H	ug/Kg	☼	96	73 - 120	10	13
Indeno[1,2,3-cd]pyrene - RE	1.5	H	218	193	H	ug/Kg	☼	88	65 - 121	13	15
Naphthalene - RE	1.8	H B	218	187	H	ug/Kg	☼	85	70 - 120	9	12
Phenanthrene - RE	4.1	H	218	200	H	ug/Kg	☼	90	73 - 120	9	11
Pyrene - RE	5.5	H	218	227	H	ug/Kg	☼	101	70 - 120	11	12

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14 - RE	*91*		*57 - 120*

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

Lab Sample ID: MB 580-281027/1-A
Matrix: Water
Analysis Batch: 281188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.45	0.061	ug/L		08/07/18 13:01	08/08/18 18:44	1
PCB-1221	ND		0.45	0.075	ug/L		08/07/18 13:01	08/08/18 18:44	1
PCB-1232	ND		0.45	0.063	ug/L		08/07/18 13:01	08/08/18 18:44	1
PCB-1242	ND		0.45	0.059	ug/L		08/07/18 13:01	08/08/18 18:44	1
PCB-1248	ND		0.45	0.052	ug/L		08/07/18 13:01	08/08/18 18:44	1
PCB-1254	ND		0.45	0.075	ug/L		08/07/18 13:01	08/08/18 18:44	1
PCB-1260	ND		0.45	0.061	ug/L		08/07/18 13:01	08/08/18 18:44	1

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

Lab Sample ID: MB 580-281027/1-A
Matrix: Water
Analysis Batch: 281188

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281027

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	44		38 - 140	08/07/18 13:01	08/08/18 18:44	1
Tetrachloro-m-xylene	65		40 - 120	08/07/18 13:01	08/08/18 18:44	1

Lab Sample ID: LCS 580-281027/2-A
Matrix: Water
Analysis Batch: 281188

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281027

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1.00	0.792		ug/L		79	50 - 121		
PCB-1260			1.00	0.768		ug/L		77	55 - 132		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	57		38 - 140
Tetrachloro-m-xylene	78		40 - 120

Lab Sample ID: LCSD 580-281027/3-A
Matrix: Water
Analysis Batch: 281188

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 281027

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1.00	0.784		ug/L		78	50 - 121	1	25
PCB-1260			1.00	0.825		ug/L		83	55 - 132	7	22

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	63		38 - 140
Tetrachloro-m-xylene	77		40 - 120

Lab Sample ID: MB 580-281111/1-A
Matrix: Solid
Analysis Batch: 281924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.0	0.34	ug/Kg		08/08/18 09:42	08/19/18 02:08	1
PCB-1221	ND		2.0	0.95	ug/Kg		08/08/18 09:42	08/19/18 02:08	1
PCB-1232	ND		2.0	0.47	ug/Kg		08/08/18 09:42	08/19/18 02:08	1
PCB-1242	ND		2.0	0.49	ug/Kg		08/08/18 09:42	08/19/18 02:08	1
PCB-1248	ND		2.0	0.16	ug/Kg		08/08/18 09:42	08/19/18 02:08	1
PCB-1254	ND		2.0	0.79	ug/Kg		08/08/18 09:42	08/19/18 02:08	1
PCB-1260	ND		2.0	0.34	ug/Kg		08/08/18 09:42	08/19/18 02:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	99		54 - 142	08/08/18 09:42	08/19/18 02:08	1
Tetrachloro-m-xylene	67		58 - 122	08/08/18 09:42	08/19/18 02:08	1

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

Lab Sample ID: LCS 580-281111/2-A
Matrix: Solid
Analysis Batch: 281924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			10.0	7.94		ug/Kg		79	64 - 120		
PCB-1260			10.0	8.37		ug/Kg		84	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*97*		*54 - 142*
Tetrachloro-m-xylene	*59*		*58 - 122*

Lab Sample ID: 580-79329-1 MS
Matrix: Solid
Analysis Batch: 281924

Client Sample ID: PDI-SC-S144-0to2
Prep Type: Total/NA
Prep Batch: 281111

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND	F1 F2	20.5	10.9	F1	ug/Kg	☼	53	64 - 120		
PCB-1260	7.0	F1	20.5	13.7	F1	ug/Kg	☼	33	63 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*66*		*54 - 142*
Tetrachloro-m-xylene	*55*	*X*	*58 - 122*

Lab Sample ID: 580-79329-1 MSD
Matrix: Solid
Analysis Batch: 281924

Client Sample ID: PDI-SC-S144-0to2
Prep Type: Total/NA
Prep Batch: 281111

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND	F1 F2	20.6	8.62	F1 F2	ug/Kg	☼	42	64 - 120	23	21
PCB-1260	7.0	F1	20.6	12.4	F1	ug/Kg	☼	26	63 - 130	10	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*55*		*54 - 142*
Tetrachloro-m-xylene	*50*	*X*	*58 - 122*

Lab Sample ID: MB 580-281124/1-A
Matrix: Solid
Analysis Batch: 281265

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.0	0.34	ug/Kg		08/08/18 10:34	08/10/18 10:47	1
PCB-1221	ND		2.0	0.95	ug/Kg		08/08/18 10:34	08/10/18 10:47	1
PCB-1232	ND		2.0	0.47	ug/Kg		08/08/18 10:34	08/10/18 10:47	1
PCB-1242	ND		2.0	0.49	ug/Kg		08/08/18 10:34	08/10/18 10:47	1
PCB-1248	ND		2.0	0.16	ug/Kg		08/08/18 10:34	08/10/18 10:47	1
PCB-1254	ND		2.0	0.79	ug/Kg		08/08/18 10:34	08/10/18 10:47	1
PCB-1260	ND		2.0	0.34	ug/Kg		08/08/18 10:34	08/10/18 10:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*59*		*54 - 142*	*08/08/18 10:34*	*08/10/18 10:47*	*1*
Tetrachloro-m-xylene	*60*		*58 - 122*	*08/08/18 10:34*	*08/10/18 10:47*	*1*

Lab Sample ID: LCS 580-281124/2-A
Matrix: Solid
Analysis Batch: 281265

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281124

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			10.0	7.89		ug/Kg		79	64 - 120		
PCB-1260			10.0	7.69		ug/Kg		77	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*75*		*54 - 142*
Tetrachloro-m-xylene	*59*		*58 - 122*

Lab Sample ID: 580-79329-33 MS
Matrix: Solid
Analysis Batch: 281266

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA
Prep Batch: 281124

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND	F1	13.9	8.19	F1	ug/Kg	☼	59	64 - 120		
PCB-1260	ND	* F2	13.9	7.32	F1	ug/Kg	☼	53	63 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*60*		*54 - 142*
Tetrachloro-m-xylene	*57*	*X*	*58 - 122*

Lab Sample ID: 580-79329-33 MSD
Matrix: Solid
Analysis Batch: 281266

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA
Prep Batch: 281124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND	F1	14.0	9.44		ug/Kg	☼	68	64 - 120	13	21
PCB-1260	ND	F1	14.0	8.05	F1	ug/Kg	☼	58	63 - 130	15	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*66*		*54 - 142*
Tetrachloro-m-xylene	*70*		*58 - 122*

Lab Sample ID: MB 580-281230/1-A
Matrix: Solid
Analysis Batch: 281357

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281230

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.0	0.34	ug/Kg		08/09/18 14:01	08/14/18 00:55	1
PCB-1221	ND		2.0	0.95	ug/Kg		08/09/18 14:01	08/14/18 00:55	1
PCB-1232	ND		2.0	0.47	ug/Kg		08/09/18 14:01	08/14/18 00:55	1
PCB-1242	ND		2.0	0.49	ug/Kg		08/09/18 14:01	08/14/18 00:55	1
PCB-1248	ND		2.0	0.16	ug/Kg		08/09/18 14:01	08/14/18 00:55	1
PCB-1254	ND		2.0	0.79	ug/Kg		08/09/18 14:01	08/14/18 00:55	1
PCB-1260	ND		2.0	0.34	ug/Kg		08/09/18 14:01	08/14/18 00:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*103*		*54 - 142*	*08/09/18 14:01*	*08/14/18 00:55*	*1*
Tetrachloro-m-xylene	*85*		*58 - 122*	*08/09/18 14:01*	*08/14/18 00:55*	*1*

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

Lab Sample ID: LCS 580-281230/2-A
Matrix: Solid
Analysis Batch: 281357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281230

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			10.0	9.63		ug/Kg		96	64 - 120		
PCB-1260			10.0	8.93		ug/Kg		89	63 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*108*		*54 - 142*
Tetrachloro-m-xylene	*81*		*58 - 122*

Lab Sample ID: 580-79329-37 MS
Matrix: Solid
Analysis Batch: 281357

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281230

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		10.7	6.44	F1	ug/Kg	☼	60	64 - 120		
PCB-1260	0.68	J	10.7	7.89		ug/Kg	☼	67	63 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*91*		*54 - 142*
Tetrachloro-m-xylene	*52*	*X*	*58 - 122*

Lab Sample ID: 580-79329-37 MSD
Matrix: Solid
Analysis Batch: 281357

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA
Prep Batch: 281230

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		11.0	7.75		ug/Kg	☼	70	64 - 120	19	21
PCB-1260	0.68	J	11.0	8.27		ug/Kg	☼	69	63 - 130	5	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*86*		*54 - 142*
Tetrachloro-m-xylene	*56*	*X*	*58 - 122*

Method: 9060_PSEP - TOC (Puget Sound)

Lab Sample ID: MB 580-281505/3
Matrix: Solid
Analysis Batch: 281505

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	100	J	2000	44	mg/Kg			08/13/18 14:46	1

Lab Sample ID: LCS 580-281505/4
Matrix: Solid
Analysis Batch: 281505

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	5500		mg/Kg		129	68 - 149		

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

Lab Sample ID: LCSD 580-281505/5
Matrix: Solid
Analysis Batch: 281505

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	5070		mg/Kg		119	68 - 149	8	32

Lab Sample ID: MB 580-281641/3
Matrix: Solid
Analysis Batch: 281641

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			08/15/18 08:18	1

Lab Sample ID: LCS 580-281641/4
Matrix: Solid
Analysis Batch: 281641

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	6320		mg/Kg		148	68 - 149		

Lab Sample ID: LCSD 580-281641/5
Matrix: Solid
Analysis Batch: 281641

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	5670		mg/Kg		133	68 - 149	11	32

Lab Sample ID: 580-79329-33 MS
Matrix: Solid
Analysis Batch: 281641

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates	3300		120000	122000		mg/Kg		99	68 - 149		

Lab Sample ID: 580-79329-33 MSD
Matrix: Solid
Analysis Batch: 281641

Client Sample ID: PDI-SC-S032-8to10
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	3300		120000	112000		mg/Kg		90	68 - 149	9	32

Lab Sample ID: 580-79329-33 DU
Matrix: Solid
Analysis Batch: 281641

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Duplicates	3300		3420		mg/Kg				3	50

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

Lab Sample ID: 580-79329-33 TRL
Matrix: Solid
Analysis Batch: 281641

Client Sample ID: PDI-SC-S032-8to10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
Total Organic Carbon - Duplicates	3300			3410		mg/Kg				2	20

Lab Sample ID: MB 580-281666/5
Matrix: Solid
Analysis Batch: 281666

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	156	J	2000	44	mg/Kg			08/15/18 12:09	1

Lab Sample ID: LCS 580-281666/6
Matrix: Solid
Analysis Batch: 281666

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	5920		mg/Kg		139	68 - 149		

Lab Sample ID: LCSD 580-281666/7
Matrix: Solid
Analysis Batch: 281666

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	5610		mg/Kg		131	68 - 149	5	32

Lab Sample ID: 580-79329-37 MS
Matrix: Solid
Analysis Batch: 281666

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates	410	J B	120000	118000		mg/Kg		98	68 - 149		

Lab Sample ID: 580-79329-37 MSD
Matrix: Solid
Analysis Batch: 281666

Client Sample ID: PDI-SC-S218-6to8
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	410	J B	120000	127000		mg/Kg		105	68 - 149	7	32

Lab Sample ID: 580-79329-37 DU
Matrix: Solid
Analysis Batch: 281666

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Duplicates	410	J B		593	J	mg/Kg				38	50

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

Lab Sample ID: 580-79329-37 TRL
Matrix: Solid
Analysis Batch: 281666

Client Sample ID: PDI-SC-S218-6to8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		TRL Result	TRL Qualifier	Unit	D			RSD	RSD Limit
Total Organic Carbon - Duplicates	410	J B		505	J	mg/Kg				19	20

Method: D 2216 - Percent Moisture

Lab Sample ID: 580-79329-4 DU
Matrix: Solid
Analysis Batch: 280934

Client Sample ID: PDI-SC-S144-6to8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids	59.1			59.3		%				0.3	20

Lab Sample ID: 580-79329-21 DU
Matrix: Solid
Analysis Batch: 280936

Client Sample ID: PDI-SC-S178-6.7to8.7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids	67.3			67.3		%				0	20

Method: Moisture 70C - Percent Moisture, 70 C

Lab Sample ID: 580-79329-1 DU
Matrix: Solid
Analysis Batch: 281717

Client Sample ID: PDI-SC-S144-0to2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids @ 70°C	49			49		%				0.2	20

Lab Sample ID: 580-79329-20 DU
Matrix: Solid
Analysis Batch: 282783

Client Sample ID: PDI-SC-S178-4.7to6.7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Solids @ 70°C	68			67		%				0.7	20

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

Lab Sample ID: MB 580-281287/22
Matrix: Water
Analysis Batch: 281287

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			08/09/18 12:29	1

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

Lab Sample ID: LCS 580-281287/23
Matrix: Water
Analysis Batch: 281287

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	9.75		mg/L		97	85 - 115

Method: D7928/D6913 - ASTM D7928/D6913

Lab Sample ID: 580-79329-1 DU
Matrix: Solid
Analysis Batch: 281048

Client Sample ID: PDI-SC-S144-0to2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Gravel	0.0		0.0		%		NC	20
Coarse Sand	0.0		0.0		%		NC	20
Medium Sand	0.1		0.1		%		0	20
Fine Sand	8.9		7.0	F3	%		24	20
Silt	73.6		76.1		%		3	20
Clay	17.3		16.9		%		2	20

Lab Sample ID: 580-79329-20 DU
Matrix: Solid
Analysis Batch: 281095

Client Sample ID: PDI-SC-S178-4.7to6.7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Gravel	1.3		0.0	F3	%		200	20
Coarse Sand	0.5		2.4	F3	%		131	20
Medium Sand	0.1		0.2	F3	%		67	20
Fine Sand	10.5		9.2		%		13	20
Silt	69.2		69.5		%		0.4	20
Clay	18.4		18.6		%		1	20

Client Sample ID: PDI-SC-S144-0to2
Date Collected: 08/01/18 11:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281505	08/13/18 16:53	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S144-0to2
Date Collected: 08/01/18 11:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-1
Matrix: Solid
Percent Solids: 47.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 12:57	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	281924	08/19/18 05:40	APR	TAL SEA

Client Sample ID: PDI-SC-S144-2to4
Date Collected: 08/01/18 11:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281505	08/13/18 16:59	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S144-2to4
Date Collected: 08/01/18 11:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-2
Matrix: Solid
Percent Solids: 54.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 13:23	T1W	TAL SEA
Total/NA	Prep	3546	DL		280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	100	281217	08/09/18 14:17	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 20:30	APR	TAL SEA

Client Sample ID: PDI-SC-S144-4to6

Lab Sample ID: 580-79329-3

Date Collected: 08/01/18 12:00

Matrix: Solid

Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281505	08/13/18 17:05	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S144-4to6

Lab Sample ID: 580-79329-3

Date Collected: 08/01/18 12:00

Matrix: Solid

Date Received: 08/03/18 13:45

Percent Solids: 57.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 13:49	T1W	TAL SEA
Total/NA	Prep	3546	DL		280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	100	281217	08/09/18 14:43	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 20:48	APR	TAL SEA

Client Sample ID: PDI-SC-S144-6to8

Lab Sample ID: 580-79329-4

Date Collected: 08/01/18 12:05

Matrix: Solid

Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281505	08/13/18 17:11	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S144-6to8

Lab Sample ID: 580-79329-4

Date Collected: 08/01/18 12:05

Matrix: Solid

Date Received: 08/03/18 13:45

Percent Solids: 59.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 14:15	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 21:05	APR	TAL SEA

Client Sample ID: PDI-SC-S144-8to10

Lab Sample ID: 580-79329-5
Date Collected: 08/01/18 12:10
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281505	08/13/18 17:17	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S144-8to10

Lab Sample ID: 580-79329-5
Date Collected: 08/01/18 12:10
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 61.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 14:41	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 21:23	APR	TAL SEA

Client Sample ID: PDI-SC-S144-10to12.1

Lab Sample ID: 580-79329-6
Date Collected: 08/01/18 12:15
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 09:08	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S144-10to12.1

Lab Sample ID: 580-79329-6
Date Collected: 08/01/18 12:15
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 62.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 15:08	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 21:41	APR	TAL SEA

Client Sample ID: PDI-SC-S086-0to2

Lab Sample ID: 580-79329-7
Date Collected: 08/02/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 12:40	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA

Client Sample ID: PDI-SC-S086-0to2

Lab Sample ID: 580-79329-7
Date Collected: 08/02/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S086-0to2

Lab Sample ID: 580-79329-7
Date Collected: 08/02/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		50	281139	08/08/18 15:34	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 21:59	APR	TAL SEA

Client Sample ID: PDI-SC-S086-0to2D

Lab Sample ID: 580-79329-8
Date Collected: 08/02/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 12:46	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282895	08/30/18 16:04	A1K	TAL SEA

Client Sample ID: PDI-SC-S086-0to2D

Lab Sample ID: 580-79329-8
Date Collected: 08/02/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		50	281139	08/08/18 16:53	T1W	TAL SEA
Total/NA	Prep	3546	DL		280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	500	281217	08/09/18 15:09	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282709	08/29/18 11:50	TL1	TAL SEA

Client Sample ID: PDI-SC-S086-2to3.3

Lab Sample ID: 580-79329-9
Date Collected: 08/02/18 09:25
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 12:58	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA

Client Sample ID: PDI-SC-S086-2to3.3
Lab Sample ID: 580-79329-9
Date Collected: 08/02/18 09:25
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S086-2to3.3
Lab Sample ID: 580-79329-9
Date Collected: 08/02/18 09:25
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 76.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		50	281139	08/08/18 17:19	T1W	TAL SEA
Total/NA	Prep	3546	DL		280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM	DL	500	281217	08/09/18 15:36	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 22:16	APR	TAL SEA

Client Sample ID: PDI-SC-S218-0to2
Lab Sample ID: 580-79329-10
Date Collected: 08/02/18 11:20
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:03	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S218-0to2
Lab Sample ID: 580-79329-10
Date Collected: 08/02/18 11:20
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 56.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 17:46	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 22:34	APR	TAL SEA

Client Sample ID: PDI-SC-S218-2to4.5
Lab Sample ID: 580-79329-11
Date Collected: 08/02/18 11:25
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:09	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA

Client Sample ID: PDI-SC-S218-2to4.5

Lab Sample ID: 580-79329-11
Date Collected: 08/02/18 11:25
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S218-2to4.5

Lab Sample ID: 580-79329-11
Date Collected: 08/02/18 11:25
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 61.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 18:12	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 22:52	APR	TAL SEA

Client Sample ID: PDI-SC-S218-4.5to6

Lab Sample ID: 580-79329-12
Date Collected: 08/02/18 11:30
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:15	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S218-4.5to6

Lab Sample ID: 580-79329-12
Date Collected: 08/02/18 11:30
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281139	08/08/18 18:39	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 23:10	APR	TAL SEA

Client Sample ID: PDI-SC-S172-2to4

Lab Sample ID: 580-79329-13
Date Collected: 08/02/18 17:55
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:20	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S172-2to4
Date Collected: 08/02/18 17:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-13
Matrix: Solid
Percent Solids: 52.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		50	281139	08/08/18 19:05	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 23:27	APR	TAL SEA

Client Sample ID: PDI-SC-S172-2to4D
Date Collected: 08/02/18 17:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:26	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282895	08/30/18 16:04	A1K	TAL SEA

Client Sample ID: PDI-SC-S172-2to4D
Date Collected: 08/02/18 17:55
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-14
Matrix: Solid
Percent Solids: 51.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		50	281139	08/08/18 19:31	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/28/18 23:45	APR	TAL SEA

Client Sample ID: PDI-SC-S172-4to6
Date Collected: 08/02/18 18:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:32	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S172-4to6
Date Collected: 08/02/18 18:00
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-15
Matrix: Solid
Percent Solids: 68.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		5	281139	08/08/18 19:57	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-SC-S172-4to6
Lab Sample ID: 580-79329-15
Date Collected: 08/02/18 18:00
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 68.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8082A		1	282696	08/29/18 00:03	APR	TAL SEA

Client Sample ID: PDI-SC-S172-6to8.1
Lab Sample ID: 580-79329-16
Date Collected: 08/02/18 18:05
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:38	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S172-6to8.1
Lab Sample ID: 580-79329-16
Date Collected: 08/02/18 18:05
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 67.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		5	281139	08/08/18 20:23	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/29/18 00:20	APR	TAL SEA

Client Sample ID: PDI-SC-S178-0to2
Lab Sample ID: 580-79329-17
Date Collected: 08/02/18 15:55
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:50	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S178-0to2
Lab Sample ID: 580-79329-17
Date Collected: 08/02/18 15:55
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 48.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 20:49	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282696	08/29/18 00:38	APR	TAL SEA

Client Sample ID: PDI-SC-S178-2to3.7

Lab Sample ID: 580-79329-18
Date Collected: 08/02/18 16:00
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 13:55	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S178-2to3.7

Lab Sample ID: 580-79329-18
Date Collected: 08/02/18 16:00
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 51.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 21:15	T1W	TAL SEA
Total/NA	Prep	3550B			281111	08/08/18 09:42	TTN	TAL SEA
Total/NA	Analysis	8082A		1	282709	08/29/18 10:57	TL1	TAL SEA

Client Sample ID: PDI-SC-S178-3.7to4.7

Lab Sample ID: 580-79329-19
Date Collected: 08/02/18 16:05
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 14:01	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	281717	08/07/18 14:21	HJM	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281048	08/07/18 14:21	A1K	TAL SEA

Client Sample ID: PDI-SC-S178-3.7to4.7

Lab Sample ID: 580-79329-19
Date Collected: 08/02/18 16:05
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 59.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		10	281139	08/08/18 21:41	T1W	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281265	08/10/18 11:23	CSC	TAL SEA

Client Sample ID: PDI-SC-S178-4.7to6.7

Lab Sample ID: 580-79329-20
Date Collected: 08/02/18 16:10
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 14:07	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280934	08/06/18 16:10	JCM	TAL SEA

Client Sample ID: PDI-SC-S178-4.7to6.7

Lab Sample ID: 580-79329-20
Date Collected: 08/02/18 16:10
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:00	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S178-4.7to6.7

Lab Sample ID: 580-79329-20
Date Collected: 08/02/18 16:10
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 65.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			280938	08/06/18 17:18	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		5	281139	08/08/18 22:08	T1W	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281265	08/10/18 11:40	CSC	TAL SEA

Client Sample ID: PDI-SC-S178-6.7to8.7

Lab Sample ID: 580-79329-21
Date Collected: 08/02/18 16:15
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 14:12	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:02	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S178-6.7to8.7

Lab Sample ID: 580-79329-21
Date Collected: 08/02/18 16:15
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 67.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		1	281256	08/10/18 00:19	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281265	08/10/18 11:58	CSC	TAL SEA

Client Sample ID: PDI-SC-S178-8.7to10.7

Lab Sample ID: 580-79329-22
Date Collected: 08/02/18 16:20
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 14:18	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:03	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S178-8.7to10.7

Lab Sample ID: 580-79329-22
Date Collected: 08/02/18 16:20
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 67.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		1	281256	08/10/18 00:45	CJ	TAL SEA
Total/NA	Prep	3546	DL		281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM	DL	5	281781	08/16/18 21:24	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 14:55	CSC	TAL SEA

Client Sample ID: PDI-SC-S178-10.7to12.7

Lab Sample ID: 580-79329-23
Date Collected: 08/02/18 16:25
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 14:23	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:04	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S178-10.7to12.7

Lab Sample ID: 580-79329-23
Date Collected: 08/02/18 16:25
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 67.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		1	281256	08/10/18 01:11	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 15:13	CSC	TAL SEA

Client Sample ID: PDI-SC-S178-12.7to14

Lab Sample ID: 580-79329-24
Date Collected: 08/02/18 16:30
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 14:29	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:05	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S178-12.7to14

Lab Sample ID: 580-79329-24
Date Collected: 08/02/18 16:30
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 66.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		1	281256	08/10/18 01:37	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 15:30	CSC	TAL SEA

Client Sample ID: PDI-SC-S083-0to1.6

Lab Sample ID: 580-79329-25
Date Collected: 08/01/18 17:30
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 09:13	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:06	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S083-0to1.6

Lab Sample ID: 580-79329-25
Date Collected: 08/01/18 17:30
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 35.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		50	281256	08/10/18 02:03	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 15:48	CSC	TAL SEA

Client Sample ID: PDI-SC-S083-1.6to3.5

Lab Sample ID: 580-79329-26
Date Collected: 08/01/18 17:35
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 09:47	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:07	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S083-1.6to3.5

Lab Sample ID: 580-79329-26
Date Collected: 08/01/18 17:35
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281134	08/08/18 11:34	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		25	281321	08/10/18 15:59	ERZ	TAL SEA

Client Sample ID: PDI-SC-S083-1.6to3.5

Lab Sample ID: 580-79329-26
Date Collected: 08/01/18 17:35
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 16:06	CSC	TAL SEA

Client Sample ID: PDI-SC-S083-3.5to5.0

Lab Sample ID: 580-79329-27
Date Collected: 08/01/18 17:40
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 09:53	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:08	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S083-3.5to5.0

Lab Sample ID: 580-79329-27
Date Collected: 08/01/18 17:40
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		50	281256	08/10/18 02:30	CJ	TAL SEA
Total/NA	Prep	3546	DL		281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM	DL	500	281781	08/16/18 21:47	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 16:23	CSC	TAL SEA

Client Sample ID: PDI-SC-S083-5to6.6

Lab Sample ID: 580-79329-28
Date Collected: 08/01/18 17:45
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 11:27	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:09	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S083-5to6.6

Lab Sample ID: 580-79329-28
Date Collected: 08/01/18 17:45
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		50	281256	08/10/18 02:56	CJ	TAL SEA

Client Sample ID: PDI-SC-S083-5to6.6

Lab Sample ID: 580-79329-28
Date Collected: 08/01/18 17:45
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546	DL		281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM	DL	500	281781	08/16/18 22:09	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 16:41	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-0to2

Lab Sample ID: 580-79329-29
Date Collected: 08/01/18 15:40
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:04	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:10	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-0to2

Lab Sample ID: 580-79329-29
Date Collected: 08/01/18 15:40
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 80.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		1	281256	08/10/18 03:22	CJ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 16:59	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-2to4

Lab Sample ID: 580-79329-30
Date Collected: 08/01/18 15:45
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:10	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:11	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-2to4

Lab Sample ID: 580-79329-30
Date Collected: 08/01/18 15:45
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281014	08/07/18 11:50	TTN	TAL SEA
Total/NA	Analysis	8270D SIM		1	281256	08/10/18 03:48	CJ	TAL SEA

Client Sample ID: PDI-SC-S032-2to4

Lab Sample ID: 580-79329-30
Date Collected: 08/01/18 15:45
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 17:17	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-4to6

Lab Sample ID: 580-79329-31
Date Collected: 08/01/18 15:50
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:15	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:12	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-4to6

Lab Sample ID: 580-79329-31
Date Collected: 08/01/18 15:50
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 65.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281134	08/08/18 11:34	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281321	08/10/18 16:22	ERZ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281788	08/16/18 17:10	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-6to8

Lab Sample ID: 580-79329-32
Date Collected: 08/01/18 15:55
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:21	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:13	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-6to8

Lab Sample ID: 580-79329-32
Date Collected: 08/01/18 15:55
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 67.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281134	08/08/18 11:34	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281321	08/10/18 16:44	ERZ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 17:52	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-8to10

Lab Sample ID: 580-79329-33
Date Collected: 08/01/18 16:00
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 08:43	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:14	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-8to10

Lab Sample ID: 580-79329-33
Date Collected: 08/01/18 16:00
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 71.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281134	08/08/18 11:34	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281321	08/10/18 17:06	ERZ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281266	08/10/18 18:10	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-10to12

Lab Sample ID: 580-79329-34
Date Collected: 08/01/18 16:05
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:27	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:15	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-10to12

Lab Sample ID: 580-79329-34
Date Collected: 08/01/18 16:05
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 68.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281134	08/08/18 11:34	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281321	08/10/18 18:13	ERZ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281788	08/16/18 17:45	CSC	TAL SEA

Client Sample ID: PDI-SC-S032-12to14

Lab Sample ID: 580-79329-35
Date Collected: 08/01/18 16:10
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:32	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA

Client Sample ID: PDI-SC-S032-12to14

Lab Sample ID: 580-79329-35
Date Collected: 08/01/18 16:10
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:16	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S032-12to14

Lab Sample ID: 580-79329-35
Date Collected: 08/01/18 16:10
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 70.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281134	08/08/18 11:34	JCM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281321	08/10/18 18:36	ERZ	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281788	08/16/18 18:03	CSC	TAL SEA

Client Sample ID: PDI-SC-S172-0to2

Lab Sample ID: 580-79329-36
Date Collected: 08/02/18 17:50
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:38	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282783	08/15/18 08:17	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281095	08/08/18 08:20	JKM	TAL SEA

Client Sample ID: PDI-SC-S172-0to2

Lab Sample ID: 580-79329-36
Date Collected: 08/02/18 17:50
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 41.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281359	08/10/18 17:49	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		50	281430	08/13/18 16:26	TL1	TAL SEA
Total/NA	Prep	3546	RE		281984	08/20/18 12:34	SPS	TAL SEA
Total/NA	Analysis	8270D SIM	RE	100	282110	08/21/18 18:50	T1W	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281788	08/16/18 18:20	CSC	TAL SEA

Client Sample ID: PDI-SC-S218-6to8

Lab Sample ID: 580-79329-37
Date Collected: 08/02/18 11:35
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281666	08/15/18 12:17	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA

Client Sample ID: PDI-SC-S218-6to8

Lab Sample ID: 580-79329-37

Date Collected: 08/02/18 11:35

Matrix: Solid

Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture 70C		1	282784	08/15/18 08:12	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281204	08/09/18 09:26	JKM	TAL SEA

Client Sample ID: PDI-SC-S218-6to8

Lab Sample ID: 580-79329-37

Date Collected: 08/02/18 11:35

Matrix: Solid

Date Received: 08/03/18 13:45

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281359	08/10/18 17:49	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		1	281430	08/13/18 16:52	TL1	TAL SEA
Total/NA	Prep	3546	RE		281984	08/20/18 12:34	SPS	TAL SEA
Total/NA	Analysis	8270D SIM	RE	1	282110	08/21/18 19:16	T1W	TAL SEA
Total/NA	Prep	3550B			281230	08/09/18 14:01	TTN	TAL SEA
Total/NA	Analysis	8082A		1	281357	08/14/18 01:30	CSC	TAL SEA

Client Sample ID: PDI-SC-S218-8to10

Lab Sample ID: 580-79329-38

Date Collected: 08/02/18 11:40

Matrix: Solid

Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:51	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282784	08/15/18 08:13	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281204	08/09/18 09:26	JKM	TAL SEA

Client Sample ID: PDI-SC-S218-8to10

Lab Sample ID: 580-79329-38

Date Collected: 08/02/18 11:40

Matrix: Solid

Date Received: 08/03/18 13:45

Percent Solids: 79.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281359	08/10/18 17:49	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		1	281430	08/13/18 18:09	TL1	TAL SEA
Total/NA	Prep	3546	RE		281984	08/20/18 12:34	SPS	TAL SEA
Total/NA	Analysis	8270D SIM	RE	1	282110	08/21/18 20:33	T1W	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281788	08/16/18 18:38	CSC	TAL SEA

Client Sample ID: PDI-SC-S228-0to2.3
Lab Sample ID: 580-79329-39
Date Collected: 08/03/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060_PSEP		1	281641	08/15/18 10:56	SPP	TAL SEA
Total/NA	Analysis	D 2216		1	280936	08/06/18 16:37	JCM	TAL SEA
Total/NA	Analysis	Moisture 70C		1	282784	08/15/18 08:14	A1K	TAL SEA
Total/NA	Analysis	D7928/D6913		1	281204	08/09/18 09:26	JKM	TAL SEA

Client Sample ID: PDI-SC-S228-0to2.3
Lab Sample ID: 580-79329-39
Date Collected: 08/03/18 09:20
Matrix: Solid
Date Received: 08/03/18 13:45
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			281359	08/10/18 17:49	BAH	TAL SEA
Total/NA	Analysis	8270D SIM		10	281430	08/13/18 18:35	TL1	TAL SEA
Total/NA	Prep	3546	RE		281984	08/20/18 12:34	SPS	TAL SEA
Total/NA	Analysis	8270D SIM	RE	100	282110	08/21/18 20:59	T1W	TAL SEA
Total/NA	Prep	3550B			281124	08/08/18 10:34	BAH	TAL SEA
Total/NA	Analysis	8082A		1	281788	08/16/18 18:56	CSC	TAL SEA

Client Sample ID: PDI-RB-SS-180801
Lab Sample ID: 580-79329-44
Date Collected: 08/01/18 13:55
Matrix: Water
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			280882	08/06/18 09:54	JSM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281414	08/13/18 14:30	CJ	TAL SEA
Total/NA	Prep	3510C			281027	08/07/18 13:01	JCM	TAL SEA
Total/NA	Analysis	8082A		1	281188	08/08/18 19:55	TL1	TAL SEA
Total/NA	Analysis	SM 5310B		1	281287	08/09/18 12:29	ASJ	TAL SEA

Client Sample ID: PDI-RB-SS-180802-1645
Lab Sample ID: 580-79329-45
Date Collected: 08/02/18 16:45
Matrix: Water
Date Received: 08/03/18 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			280882	08/06/18 09:54	JSM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281414	08/13/18 14:52	CJ	TAL SEA
Total/NA	Prep	3510C			281027	08/07/18 13:01	JCM	TAL SEA
Total/NA	Analysis	8082A		1	281188	08/08/18 20:13	TL1	TAL SEA
Total/NA	Analysis	SM 5310B		1	281287	08/09/18 12:29	ASJ	TAL SEA

Lab Chronicle

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

TestAmerica Job ID: 580-79329-1

Client Sample ID: PDI-RB-SS-180802

Date Collected: 08/02/18 09:50
Date Received: 08/03/18 13:45

Lab Sample ID: 580-79329-46

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			280882	08/06/18 09:54	JSM	TAL SEA
Total/NA	Analysis	8270D SIM		1	281414	08/13/18 15:14	CJ	TAL SEA
Total/NA	Prep	3510C			281027	08/07/18 13:01	JCM	TAL SEA
Total/NA	Analysis	8082A		1	281188	08/08/18 20:30	TL1	TAL SEA
Total/NA	Analysis	SM 5310B		1	281287	08/09/18 12:29	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: 580-79329-1
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: 580-79329-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-79329-1	PDI-SC-S144-0to2	Solid	08/01/18 11:50	08/03/18 13:45
580-79329-2	PDI-SC-S144-2to4	Solid	08/01/18 11:55	08/03/18 13:45
580-79329-3	PDI-SC-S144-4to6	Solid	08/01/18 12:00	08/03/18 13:45
580-79329-4	PDI-SC-S144-6to8	Solid	08/01/18 12:05	08/03/18 13:45
580-79329-5	PDI-SC-S144-8to10	Solid	08/01/18 12:10	08/03/18 13:45
580-79329-6	PDI-SC-S144-10to12.1	Solid	08/01/18 12:15	08/03/18 13:45
580-79329-7	PDI-SC-S086-0to2	Solid	08/02/18 09:20	08/03/18 13:45
580-79329-8	PDI-SC-S086-0to2D	Solid	08/02/18 09:20	08/03/18 13:45
580-79329-9	PDI-SC-S086-2to3.3	Solid	08/02/18 09:25	08/03/18 13:45
580-79329-10	PDI-SC-S218-0to2	Solid	08/02/18 11:20	08/03/18 13:45
580-79329-11	PDI-SC-S218-2to4.5	Solid	08/02/18 11:25	08/03/18 13:45
580-79329-12	PDI-SC-S218-4.5to6	Solid	08/02/18 11:30	08/03/18 13:45
580-79329-13	PDI-SC-S172-2to4	Solid	08/02/18 17:55	08/03/18 13:45
580-79329-14	PDI-SC-S172-2to4D	Solid	08/02/18 17:55	08/03/18 13:45
580-79329-15	PDI-SC-S172-4to6	Solid	08/02/18 18:00	08/03/18 13:45
580-79329-16	PDI-SC-S172-6to8.1	Solid	08/02/18 18:05	08/03/18 13:45
580-79329-17	PDI-SC-S178-0to2	Solid	08/02/18 15:55	08/03/18 13:45
580-79329-18	PDI-SC-S178-2to3.7	Solid	08/02/18 16:00	08/03/18 13:45
580-79329-19	PDI-SC-S178-3.7to4.7	Solid	08/02/18 16:05	08/03/18 13:45
580-79329-20	PDI-SC-S178-4.7to6.7	Solid	08/02/18 16:10	08/03/18 13:45
580-79329-21	PDI-SC-S178-6.7to8.7	Solid	08/02/18 16:15	08/03/18 13:45
580-79329-22	PDI-SC-S178-8.7to10.7	Solid	08/02/18 16:20	08/03/18 13:45
580-79329-23	PDI-SC-S178-10.7to12.7	Solid	08/02/18 16:25	08/03/18 13:45
580-79329-24	PDI-SC-S178-12.7to14	Solid	08/02/18 16:30	08/03/18 13:45
580-79329-25	PDI-SC-S083-0to1.6	Solid	08/01/18 17:30	08/03/18 13:45
580-79329-26	PDI-SC-S083-1.6to3.5	Solid	08/01/18 17:35	08/03/18 13:45
580-79329-27	PDI-SC-S083-3.5to5.0	Solid	08/01/18 17:40	08/03/18 13:45
580-79329-28	PDI-SC-S083-5to6.6	Solid	08/01/18 17:45	08/03/18 13:45
580-79329-29	PDI-SC-S032-0to2	Solid	08/01/18 15:40	08/03/18 13:45
580-79329-30	PDI-SC-S032-2to4	Solid	08/01/18 15:45	08/03/18 13:45
580-79329-31	PDI-SC-S032-4to6	Solid	08/01/18 15:50	08/03/18 13:45
580-79329-32	PDI-SC-S032-6to8	Solid	08/01/18 15:55	08/03/18 13:45
580-79329-33	PDI-SC-S032-8to10	Solid	08/01/18 16:00	08/03/18 13:45
580-79329-34	PDI-SC-S032-10to12	Solid	08/01/18 16:05	08/03/18 13:45
580-79329-35	PDI-SC-S032-12to14	Solid	08/01/18 16:10	08/03/18 13:45
580-79329-36	PDI-SC-S172-0to2	Solid	08/02/18 17:50	08/03/18 13:45
580-79329-37	PDI-SC-S218-6to8	Solid	08/02/18 11:35	08/03/18 13:45
580-79329-38	PDI-SC-S218-8to10	Solid	08/02/18 11:40	08/03/18 13:45
580-79329-39	PDI-SC-S228-0to2.3	Solid	08/03/18 09:20	08/03/18 13:45
580-79329-44	PDI-RB-SS-180801	Water	08/01/18 13:55	08/03/18 13:45
580-79329-45	PDI-RB-SS-180802-1645	Water	08/02/18 16:45	08/03/18 13:45
580-79329-46	PDI-RB-SS-180802	Water	08/02/18 09:50	08/03/18 13:45

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** **Analysis Turnaround Time** Calendar (C) or Work Days (W) _W_____	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date: 8/3/18** **Carrier: Courier**	COC No: 1 1 of 4 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:	[x] 21 days [ ] Other _____			

580-79329 Chain of Custody

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-S144 - 0 to 2	8/1/2018	11:50	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 2 to 4	8/1/2018	11:55	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 4 to 6	8/1/2018	12:00	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 6 to 8	8/1/2018	12:05	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 8 to 10	8/1/2018	12:10	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 10 to 12.1	8/1/2018	12:15	SC		ED	4		x	x	x	x		
PDI-SC-S086 - 0 to 2	8/2/2018	9:20	SC		ED	4		x	x	x	x		
PDI-SC-S086 - 0 to 2D	8/2/2018	9:20	SC		ED	3		x	x	x	x		
PDI-SC-S086 - 2 to 3.3	8/2/2018	9:25	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 0 to 2	8/2/2018	11:20	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 2 to 4.5	8/2/2018	11:25	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 4.5 to 6	8/2/2018	11:30	SC		ED	4		x	x	x	x		
								AG	AG	WMG	WMG	AG	

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

Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid

Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

Sample Disposal

[ ] Return To Client [X] posal By Lab [X] chive For **12** Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

1.2, 2.3, 4.6, 3.1, 1.7, 2.4, 2.2, 3.9

Relinquished by:	Company: AECOM	Date/Time: 8/3/18 13:05	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAL	Date/Time: 8/3/18 1345
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
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:

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

Site Contact: Jennifer Ray / Michaela McCoog
Laboratory Contact: Elaine-Walker

Date: 8/3/18
Carrier: Courier

COC No: 1
2 of 4 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-S172 - 2 to 4	8/2/2018	17:50	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 2 to 4D	8/2/2018	17:55	SC		ED	3		x	x		x		
PDI-SC-S172 - 4 to 6	8/2/2018	18:00	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 6 to 8.1	8/2/2018	18:05	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 0 to 2	8/2/2018	15:55	SC		ED	5		x	x	x	x		
PDI-SC-S178 - 2 to 3.7	8/2/2018	16:00	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 3.7 to 4.7	8/2/2018	16:05	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 4.7 to 6.7	8/2/2018	16:10	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 6.7 to 8.7	8/2/2018	16:15	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 8.7 to 10.7	8/2/2018	16:20	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 10.7 to 12.7	8/2/2018	16:25	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 12.7 to 14	8/2/2018	16:30	SC		ED	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For **12** Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

Relinquished by:		Company: AECOM	Date/Time: 8/3/18 13:05	Received by:		Company: M-E-	Date/Time: 8/3/18 1305
Relinquished by:		Company: M-E-	Date/Time: 8/3/18 1345	Received by:		Company: TARGA	Date/Time: 8/3/18 1345
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
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:

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

Site Contact: Jennifer Ray / Michaela McCoog
Laboratory Contact: Elaine-Walker

Date: 8/3/18
Carrier: Courier

COC No: 1
3 of 4 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-S083 - 0 to 1.6	8/1/2018	17:30	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 1.6 to 3.5	8/1/2018	17:35	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 3.5 to 5.0	8/1/2018	17:40	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 5 to 6.6	8/1/2018	17:45	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 0 to 2	8/1/2018	15:40	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 2 to 4	8/1/2018	15:45	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 4 to 6	8/1/2018	15:50	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 6 to 8	8/1/2018	15:55	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 8 to 10	8/1/2018	16:00	SC	MS/MSD	ED	6		x	x	x	x		
PDI-SC-S032 - 10 to 12	8/1/2018	16:05	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 12 to 14	8/1/2018	16:10	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 0 to 2	8/2/2018	17:50	SC		ED	4		x	x	x	x		
								AG	AG	WMG	WMG	AG	

Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu
Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid
Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

Sample Disposal
[ ] Return To Client [X] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

Relinquished by: RJP		Company: AECOM	Date/Time: 8/3/18 13:05	Received by:		Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:		Company: M.E.	Date/Time: 8/3/18 1345	Received by:		Company: CARO K	Date/Time: 8/3/18 1345
Relinquished by:		Company:	Date/Time:	Received by:		Company:	Date/Time:

11/9/2018 (Rev. 1)

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

SUBSURFACE SEDIMENT
CHAIN OF CUSTODY

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:

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

Site Contact: Jennifer Ray / Michaela McCoog
Laboratory Contact: Elaine-Walker

Date: 8/3/18
Carrier: Courier

COC No: 1
4 of 4 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	WQ-PCBs	WQ-PAHs	WQ-DIF	WQ-TOC	Sample Specific Notes:
PDI-SC-S218 - 6 to 8	8/2/2018	11:35	SC	MS/MSD	ED	7		x	x	x	x	X					
PDI-SC-S218 - 8 to 10	8/2/2018	11:40	SC		ED	4		x	x	x	x						
PDI-SC-S228 - 0 to 2.3	8/3/2018	9:20	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 0 to 2	8/3/2018	10:15	SC		ED	4		x	x	x	x						On hold JO 8/3/18
PDI-SC-S221 - 2 to 4	8/3/2018	10:20	SC	MS/MSD	ED	6		x	x	x	x						
PDI-SC-S221 - 4 to 6	8/3/2018	10:25	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 6 to 8.1	8/3/2018	10:30	SC		ED	4		x	x	x	x						
PDI-RB-SS-180801	8/1/18	13:55	SC		ED	7		x	x	x	x		X	X	X	X	
PDI-RB-SS-180802	8/2/18	16:45	SC		ED	7		x	x	x	x		X	X	X	X	
PDI-RB-SS-1808-02	8/2/18	09:50	SC		ED	7		x	x	x	x		X	X	X	X	
- to			SC		ED			x	x	x	x						
- to			SC		ED			x	x	x	x						
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: Separate reports for each lab

Relinquished by: RJ	Company: AECOM	Date/Time: 8/2/18 1305	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAL POK	Date/Time: 8/3/18 1345
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
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:

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

Site Contact: Jennifer Ray / Michaela McCoog
Laboratory Contact: Elaine-Walker
Date: 8/3/18
Carrier: Courier
COC No: 1
1 of 9 pages

580-79329 Chain of Custody

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-S144 - 0 to 2	8/1/2018	11:50	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 2 to 4	8/1/2018	11:55	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 4 to 6	8/1/2018	12:00	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 6 to 8	8/1/2018	12:05	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 8 to 10	8/1/2018	12:10	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 10 to 12.1	8/1/2018	12:15	SC		ED	4		x	x	x	x		
PDI-SC-S086 - 0 to 2	8/2/2018	9:20	SC		ED	4		x	x	x	x		
PDI-SC-S086 - 0 to 2D	8/2/2018	9:20	SC		ED	3		x	x		x		
PDI-SC-S086 - 2 to 3.3	8/2/2018	9:25	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 0 to 2	8/2/2018	11:20	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 2 to 4.5	8/2/2018	11:25	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 4.5 to 6	8/2/2018	11:30	SC		ED	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

1.2, 2.3, 4.6, 3.1, 1.7, 2.4, 2.2, 3.5

Relinquished by:	Company: AECOM	Date/Time: 8/3/18 13:05	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAROL	Date/Time: 8/3/18 1345
Relinquished by:	Company: TAROL	Date/Time: 8/3/18 1700	Received by:	Company: Sea Da	Date/Time: 8/4/18 1020

IRS = 0.8/0.8 w/cs. IRS = 0.1/0.1 w/cs
IRS = 1.2/1.2 w/cs. IRS = 0.4/0.4 w/cs.

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: 8/3/18** **Carrier: Courier**	COC No: 1 2 of 4 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**	**Analysis Turnaround Time** Calendar (C) or Work Days (W) W [x] 21 days [ ] Other _____			
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-S172 - 2 to 4	8/2/2018	17:55	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 2 to 4D	8/2/2018	17:55	SC		ED	3		x	x		x		
PDI-SC-S172 - 4 to 6	8/2/2018	18:00	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 6 to 8.1	8/2/2018	18:05	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 0 to 2	8/2/2018	15:55	SC		ED	5		x	x	x	x		
PDI-SC-S178 - 2 to 3.7	8/2/2018	16:00	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 3.7 to 4.7	8/2/2018	16:05	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 4.7 to 6.7	8/2/2018	16:10	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 6.7 to 8.7	8/2/2018	16:15	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 8.7 to 10.7	8/2/2018	16:20	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 10.7 to 12.7	8/2/2018	16:25	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 12.7 to 14	8/2/2018	16:30	SC		ED	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

Relinquished by:	Company: AECOM	Date/Time: 8/3/18 1305	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAROK	Date/Time: 8/3/18 1345
Relinquished by:	Company: TAROK	Date/Time: 8/3/18 1700	Received by:	Company: SEA TA	Date/Time: 8/4/18 1020

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** **Analysis Turnaround Time** Calendar (C) or Work Days (W) W	**Site Contact: Jennifer Ray / Michaela McCoog** **Laboratory Contact: Elaine-Walker**	**Date: 8/3/18** **Carrier; Courier**	COC No: 1 3 of 4 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**	[x] 21 days [ ] Other _____

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-S083 - 0 to 1.6	8/1/2018	17:30	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 1.6 to 3.5	8/1/2018	17:35	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 3.5 to 5.0	8/1/2018	17:40	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 5 to 6.6	8/1/2018	17:45	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 0 to 2	8/1/2018	15:40	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 2 to 4	8/1/2018	15:45	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 4 to 6	8/1/2018	15:50	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 6 to 8	8/1/2018	15:55	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 8 to 10	8/1/2018	16:00	SC	MS/MSD	ED	6		x	x	x	x		
PDI-SC-S032 - 10 to 12	8/1/2018	16:05	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 12 to 14	8/1/2018	16:10	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 0 to 2	8/2/2018	17:50	SC		ED	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For **12** Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

Relinquished by:	Company: AECOM	Date/Time: 8/3/18 13:05	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAPOK	Date/Time: 8/3/18 1345
Relinquished by:	Company: TAPOK	Date/Time: 8/3/18 1700	Received by:	Company: SEA TA	Date/Time: 8/4/18 1020

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

SUBSURFACE SEDIMENT
CHAIN OF CUSTODY

Client Contact	Project Contact: Amy Dahl / Chelsey Cook	Site Contact: Jennifer Ray / Michaela McCoog	Date: 8/3/18	COC No: 1
AECOM	Tel: (206) 438-2261 / (206) 438-2010	Laboratory Contact: Elaine-Walker	Carrier: Courier	4 of 4 pages
1111 3rd Ave Suite 1600	Analysis Turnaround Time			
Seattle, WA 98101	Calendar (C) or Work Days (W) W			
Phone: (206) 438-2700 Fax: 1+(866) 495-5288	[x] 21 days			
Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling	[ ] Other			
Portland, OR				
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	WQ-PCBs	WQ-PAHs	WQ-DIF	WQ-TOC	Sample Specific Notes:
PDI-SC-S218 - 6 to 8	8/2/2018	11:35	SC	MS/MSD	ED	7		x	x	x	x	X					
PDI-SC-S218 - 8 to 10	8/2/2018	11:40	SC		ED	4		x	x	x	x						
PDI-SC-S228 - 0 to 2.3	8/3/2018	9:20	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 0 to 2	8/3/2018	10:15	SC		ED	4		x	x	x	x						On hold JO 8/5/18 Per Aecom
PDI-SC-S221 - 2 to 4	8/3/2018	10:20	SC	MS/MSD	ED	6		x	x	x	x						
PDI-SC-S221 - 4 to 6	8/3/2018	10:25	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 6 to 8.1	8/3/2018	10:30	SC		ED	4		x	x	x	x						
PDI-RB-SS-180801	8/1/18	13:55	SC		ED	7		x	x	x	x		X	X	X	X	
PDI-RB-SS-180802-1645	8/2/18	16:45	SC		ED	7		x	x	x	x		X	X	X	X	
PDI-RB-SS-1808-02	8/2/18	07:50	SC		ED	7		x	x	x	x		X	X	X	X	
- to			SC		ED			x	x	x	x						
- to			SC		ED			x	x	x	x						
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	AECOM	8/2/18 1345		M.E.	8/3/18 1305
	M.E.	8/3/18 1345		TAL-OK	8/3/18 1345
	TAL-OK	8/3/18 1700		SEA TA	8/4/18 1020

Reuse S

SUBSURFACE SEDIMENT
CHAIN OF CUSTODY

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

580-79329 Chain of Custody

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-S144 - 0 to 2	8/1/2018	11:50	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 2 to 4	8/1/2018	11:55	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 4 to 6	8/1/2018	12:00	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 6 to 8	8/1/2018	12:05	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 8 to 10	8/1/2018	12:10	SC		ED	4		x	x	x	x		
PDI-SC-S144 - 10 to 12.1	8/1/2018	12:15	SC		ED	4		x	x	x	x		
PDI-SC-S086 - 0 to 2	8/2/2018	9:20	SC		ED	4		x	x	x	x		
PDI-SC-S086 - 0 to 2D	8/2/2018	9:20	SC		ED	3		x	x	1x	x		
PDI-SC-S086 - 2 to 3.3	8/2/2018	9:25	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 0 to 2	8/2/2018	11:20	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 2 to 4.5	8/2/2018	11:25	SC		ED	4		x	x	x	x		
PDI-SC-S218 - 4.5 to 6	8/2/2018	11:30	SC		ED	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: Separate reports for each lab

1.2, 2.3, 4.6, 3.1, 1.7, 2.4, 2.2, 3.9

Relinquished by:	Company: AECOM	Date/Time: 8/3/18 13:05	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAROL	Date/Time: 8/3/18 1345
Relinquished by:	Company: TAROL	Date/Time: 8/3/18 1700	Received by:	Company: SEA TA	Date/Time: 8/4/18 1020

IRS = 0.8/0.8 w/c.s. IRS = 0.1/0.1 w/c.s

IRS = 1.2/1.2 w/c.s. IRS = 0.4/0.4 w/CS.

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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
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:

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

Site Contact: Jennifer Ray / Michaela McCoog
Laboratory Contact: Elaine-Walker

Date: 8/3/18
Carrier: Courier

COC No: 1
2 of 4 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-S172 - 2 to 4	8/2/2018	17:55	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 2 to 4D	8/2/2018	17:55	SC		ED	3		x	x	x	x		
PDI-SC-S172 - 4 to 6	8/2/2018	18:00	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 6 to 8.1	8/2/2018	18:05	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 0 to 2	8/2/2018	15:55	SC		ED	5		x	x	x	x	X	
PDI-SC-S178 - 2 to 3.7	8/2/2018	16:00	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 3.7 to 4.7	8/2/2018	16:05	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 4.7 to 6.7	8/2/2018	16:10	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 6.7 to 8.7	8/2/2018	16:15	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 8.7 to 10.7	8/2/2018	16:20	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 10.7 to 12.7	8/2/2018	16:25	SC		ED	4		x	x	x	x		
PDI-SC-S178 - 12.7 to 14	8/2/2018	16:30	SC		ED	4		x	x	x	x		
Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Colu								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] posal By Lab [X] chive For 12 Months

Per Aecom 8/7/18 (KR)

Special Instructions/QC Requirements & Comments: Separate reports for each lab

Relinquished by: RA	Company: AECOM	Date/Time: 8/3/18 1305	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAPOR	Date/Time: 8/3/18 1345
Relinquished by:	Company: TAPOR	Date/Time: 8/3/18 1700	Received by: B Hauer	Company: SEA TA	Date/Time: 8/4/18 1020

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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: 8/3/18 Carrier: Courier	COC No: 1 3 of 4 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-S083 - 0 to 1.6	8/1/2018	17:30	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 1.6 to 3.5	8/1/2018	17:35	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 3.5 to 5.0	8/1/2018	17:40	SC		ED	4		x	x	x	x		
PDI-SC-S083 - 5 to 6.6	8/1/2018	17:45	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 0 to 2	8/1/2018	15:40	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 2 to 4	8/1/2018	15:45	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 4 to 6	8/1/2018	15:50	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 6 to 8	8/1/2018	15:55	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 8 to 10	8/1/2018	16:00	SC	MS/MSD	ED	6		x	x	x	x		
PDI-SC-S032 - 10 to 12	8/1/2018	16:05	SC		ED	4		x	x	x	x		
PDI-SC-S032 - 12 to 14	8/1/2018	16:10	SC		ED	4		x	x	x	x		
PDI-SC-S172 - 0 to 2	8/2/2018	17:50	SC		ED	4		x	x	x	x		
								AG	AG	WMG	WMG	AG	

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

Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid

Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

Sample Disposal

[ ] Return To Client [X] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: Separate reports for each lab

Relinquished by:	Company: AECOM	Date/Time: 8/3/18 13:05	Received by:	Company: M-E-	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAPOK	Date/Time: 8/3/18 1705
Relinquished by:	Company: TAPOK	Date/Time: 8/3/18 1700	Received by:	Company: SEA TA	Date/Time: 8/4/18 1020

11/9/2018 (Rev. 1)

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
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 _____	Date: 8/3/18 Carrier: Courier

COC No: 1 of 4 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	WQ-PCBs	WQ-PAHs	WQ-DIF	WQ-TOC	Sample Specific Notes:
PDI-SC-S218 - 6 to 8	8/2/2018	11:35	SC	MS/MSD	ED	7		x	x	x	x	X					
PDI-SC-S218 - 8 to 10	8/2/2018	11:40	SC		ED	4		x	x	x	x						
PDI-SC-S228 - 0 to 2.3	8/3/2018	9:20	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 0 to 2	8/3/2018	10:15	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 2 to 4	8/3/2018	10:20	SC	MS/MSD	ED	6		x	x	x	x						
PDI-SC-S221 - 4 to 6	8/3/2018	10:25	SC		ED	4		x	x	x	x						
PDI-SC-S221 - 6 to 8.1	8/3/2018	10:30	SC		ED	4		x	x	x	x						
PDI-AA-SS-to 180801	8/1/18	13:55	SC		ED	7		x	x	x	x[2]		X	X	X	X	
PDI-BB-SS-to 180802-1415	8/2/18	16:45	SC		ED	7		x	x	x	x[4]		X	X	X	X	
PDI-AA-SS-to 1808-02	8/2/18	09:50	SC		ED	7		x	x	x	x[3]		X	X	X	X	
- to			SC		ED			x	x	x	x[1]						
- to			SC		ED			x	x	x	x[5]						
								AG	AG	WMG	WMG	AG					

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

Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid

Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

On hold TO 8/3/18 Per AECOM

Sample Disposal

[ ] Return To Client [X] posal By Lab [X] chive For 12 Months

Special Instructions/QC Requirements & Comments: **Separate reports for each lab**

Relinquished by:	Company: AECOM	Date/Time: 8/2/18 1345	Received by:	Company: M.E.	Date/Time: 8/3/18 1305
Relinquished by:	Company: M.E.	Date/Time: 8/3/18 1345	Received by:	Company: TAL	Date/Time: 8/3/18 1345
Relinquished by:	Company: TAL	Date/Time: 8/3/18 1700	Received by:	Company: SRA TA	Date/Time: 8/4/18 1020

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-79329-1

Login Number: 79329
List Number: 1
Creator: O'Connell, Jason I

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	