

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-78459-5

Client Project/Site: Portland Harbor Pre-Remedial Design

For:

AECOM  
1111 Third Ave  
Suite 1600  
Seattle, Washington 98101

Attn: Amy Dahl

*M. Elaine Walker*

Authorized for release by:  
7/20/2018 4:17:46 PM

Elaine Walker, Project Manager II  
(253)248-4972  
[elaine.walker@testamericainc.com](mailto:elaine.walker@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

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

TestAmerica Job ID: 580-78459-5

**Job ID: 580-78459-5**

**Laboratory: TestAmerica Seattle**

**Narrative**

## CASE NARRATIVE

**Client: AECOM**

**Project: Portland Harbor Pre-Remedial Design**

**Report Number: 580-78459-5**

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

Three samples were received on 06/29/2018; the samples arrived in good condition, properly preserved and, where required, on ice.

This report contains results for Grainsize only. All other analyses are on hold per client request.

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.

### GRAIN SIZE

**Samples PDI-SG-B430 (580-78459-1), PDI-SG-B431 (580-78459-2) and PDI-SG-B432 (580-78459-3) were analyzed for grain size in accordance with D422.** The samples were analyzed on 07/05/2018.

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

# Definitions/Glossary

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

TestAmerica Job ID: 580-78459-5

## Glossary

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

# Client Sample Results

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

TestAmerica Job ID: 580-78459-5

**Client Sample ID: PDI-SG-B430**

**Lab Sample ID: 580-78459-1**

**Date Collected: 06/28/18 14:18**

**Matrix: Solid**

**Date Received: 06/29/18 13:05**

**Method: D7928/D6913 - ASTM D7928/D6913**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	6.7				%			07/05/18 13:11	1
Coarse Sand	0.0				%			07/05/18 13:11	1
Fine Sand	42.3				%			07/05/18 13:11	1
Gravel	0.0				%			07/05/18 13:11	1
Medium Sand	0.2				%			07/05/18 13:11	1
Silt	50.8				%			07/05/18 13:11	1

# Client Sample Results

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

TestAmerica Job ID: 580-78459-5

**Client Sample ID: PDI-SG-B431**

**Lab Sample ID: 580-78459-2**

**Date Collected: 06/28/18 16:16**

**Matrix: Solid**

**Date Received: 06/29/18 13:05**

**Method: D7928/D6913 - ASTM D7928/D6913**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	1.6				%			07/05/18 13:11	1
Coarse Sand	0.1				%			07/05/18 13:11	1
Fine Sand	73.4				%			07/05/18 13:11	1
Gravel	0.0				%			07/05/18 13:11	1
Medium Sand	16.0				%			07/05/18 13:11	1
Silt	8.9				%			07/05/18 13:11	1

# Client Sample Results

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

TestAmerica Job ID: 580-78459-5

**Client Sample ID: PDI-SG-B432**

**Lab Sample ID: 580-78459-3**

**Date Collected: 06/28/18 17:40**

**Matrix: Solid**

**Date Received: 06/29/18 13:05**

**Method: D7928/D6913 - ASTM D7928/D6913**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay	1.8				%			07/05/18 13:11	1
Coarse Sand	1.8				%			07/05/18 13:11	1
Fine Sand	70.6				%			07/05/18 13:11	1
Gravel	0.0				%			07/05/18 13:11	1
Medium Sand	4.4				%			07/05/18 13:11	1
Silt	21.3				%			07/05/18 13:11	1

# Lab Chronicle

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

TestAmerica Job ID: 580-78459-5

**Client Sample ID: PDI-SG-B430**

**Date Collected: 06/28/18 14:18**

**Date Received: 06/29/18 13:05**

**Lab Sample ID: 580-78459-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D7928/D6913		1	278174	07/05/18 13:11	KAB	TAL SEA

**Client Sample ID: PDI-SG-B431**

**Date Collected: 06/28/18 16:16**

**Date Received: 06/29/18 13:05**

**Lab Sample ID: 580-78459-2**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D7928/D6913		1	278174	07/05/18 13:11	KAB	TAL SEA

**Client Sample ID: PDI-SG-B432**

**Date Collected: 06/28/18 17:40**

**Date Received: 06/29/18 13:05**

**Lab Sample ID: 580-78459-3**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D7928/D6913		1	278174	07/05/18 13:11	KAB	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: 580-78459-5

Project/Site: Portland Harbor Pre-Remedial Design

## Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-024	01-19-19
ANAB	DoD ELAP		L2236	01-19-19
ANAB	ISO/IEC 17025		L2236	01-19-19
California	State Program	9	2901	11-05-18
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-19

# Sample Summary

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

TestAmerica Job ID: 580-78459-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-78459-1	PDI-SG-B430	Solid	06/28/18 14:18	06/29/18 13:05
580-78459-2	PDI-SG-B431	Solid	06/28/18 16:16	06/29/18 13:05
580-78459-3	PDI-SG-B432	Solid	06/28/18 17:40	06/29/18 13:05

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580-78459 Chain of Custody

**SURFACE SEDIMENT  
CHAIN OF CUSTODY**

**TestAmerica-Seattle**  
 5755-8th-Street-East  
 Tacoma, WA 98424-1317  
**Ph: 253-922-2310 Fax: 253-922-5047**  
**Client Contact**  
 AECOM  
 1111 3rd Ave Suite 1600  
 Seattle, WA 98101  
 Phone: (206) 438-2700 Fax: 1+(866) 495-5288  
 Project Name: Portland Harbor Pre-Remedial Design  
 Investigation and Baseline Sampling  
 Portland, OR  
 Project #: 60566335 Study: Surface Water  
 Sample Type: D/U

Project Contact: Amy Dahl / Chebsey Cook  
 Tel: (206) 438-2261 / (206) 438-2010  
 Laboratory Contact: Elaine-Walker  
 Analysis Turnaround Time  
 Calendar (C) or Work Days (W)  
 21 days  
 Other ASAP

Sample Date	Sample Time	Matrix	OC Sample	Sampler's Initials	Total No. of Cont.
6/28/2018	14:18	SS		MT	7
6/28/2018	16:16	SS		MT	7
6/28/2018	17:40	SS		MT	7

Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column  
 Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid  
 Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

Fraction	PCB Congeners 168A	PCDFs 1613B	TPH Diesel, Metals, Mercury NWTPH-Dx, 602B, 7471A	Grain size ASTM D7928/D6913	Total organic carbon, Total solids 9060 (104C & 70C)	Archive Archive -20 C	PAHs, BEHF, Tributyltin, 8270-SIM, 8270-LI, Kron/Unger
	H	H	H	x	H	H	H
	H	H	H	x	H	H	H
	H	H	H	x	H	H	H

Site Contact: Jennifer Ray  
 Carrier: Courier  
 6/29/2018  
 COC No. 1 of 1 COCs

Sample Disposal  
 Return To Client  
 Disposal By Lab  
 Archive For 12 Months

Special Instructions/QC Requirements & Comments:  
 Analyze samples for grain size ASAP, Hold (H) remaining analyses pending further instruction.  
 Separate reports for each lab.

Relinquished by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: 6/29/18 1250	Received by: <i>[Signature]</i>	Company: M.E.	Date/Time: 6/29/18 1250
Relinquished by: <i>[Signature]</i>	Company: M.E.	Date/Time: 6/29/18 1320	Received by: <i>[Signature]</i>	Company: ASROT	Date/Time: 6/29/18 1320
Relinquished by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: 6/29/18 1320	Received by: <i>[Signature]</i>	Company: <i>[Signature]</i>	Date/Time: 6/29/18 1320

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# Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-78459-5

**Login Number: 78459**

**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	

