



ALS Environmental
ALS Group USA, Corp
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www.alsglobal.com

February 25, 2019

Analytical Report for Service Request No: K1803942
Revised Service Request No: K1803942.OXY

Amy Dahl
AECOM
1111 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Portland Harbor Pre-Remedial Design Investigation / 60566335

Dear Amy,

Enclosed is the revised report for the sample(s) submitted to our laboratory April 27, 2018
For your reference, these analyses have been assigned our service request number **K1803942**.

This report contains Oxychlordane data.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager



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www.alsglobal.com

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation
Sample Matrix: Sediment, Water

Service Request: K1803942
Date Received: 04/27/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Fourteen sediment samples and two water samples were received for analysis at ALS Environmental on 04/27/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Semivolatiles by GC/MS:

Oxychlordanes:

Method ALS SOP, Organochlorine Pesticides by GC/MS/MS 06/18/2018: The analysis of all sediment samples was initially performed past the recommended holding time by two days due to instrument capacity issues. The data was flagged to indicate the holding time violation.

Method ALS SOP, Organochlorine Pesticides by GC/MS/MS 06/18/2018: The upper control criterion was exceeded for Oxychlordanes in Continuing Calibration Verification (CCV) MS21\06172018aF033.D. The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method ALS SOP, Organochlorine Pesticides by GC/MS/MS 06/18/2018: The duplicate matrix spike recovery of Oxychlordanes for sample PDI-SG-B325-BL1 was outside the upper control criteria. Recovery in the Matrix Spike, Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method ALS SOP, Organochlorine Pesticides by GC/MS/MS 06/18/2018: The spike recovery of Oxychlordanes for Laboratory Control Sample (LCS) KQ1805734-01 was outside the lower control criterion. Recovery was acceptable in Duplicate Laboratory Control Sample (DLCS). The analyte in question was not detected in the associated field samples. The error associated with reduced recovery indicated a potential low bias. Additional analysis of the associated field sample(s) was not performed because insufficient sample holding time remained for testing. The data was flagged to indicate the problem.

Approved by



Date

02/25/2019



Chain of Custody

ALS Environmental—Kelso Laboratory
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K1 803942

SURFACE SEDIMENT CHAIN OF CUSTODY

MLS-Environmental-Kelso 317-S-13th-Ave Kelso, WA 98626 Phone: 360-577-7222 Fax: 360-636-1068		Client Contact: Amy Dahl / Chelsey Cook Tel: (206) 438-2261 / (206) 438-2010		Site Contact: Jennifer Ray 4/27/2018		COC No: _____ of _____ COCs	
RECOM 111 3rd Ave Suite 1600 Seattle, WA 98101 Phone: (206) 438-2700 Fax: 1+(866) 495-5288 Project Name: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling Portland, OR Project #: 60566335 Study: Surface Sediment		Laboratory Contact: Howard-Holmes		Carrier: Courier			
		Analysis Turnaround Time Calendar (C) or Work Days (W)					
		<input checked="" type="checkbox"/> 21 days <input type="checkbox"/> Other _____					

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction												Sample Specific Notes
1 PDI-SG-B321-BL1	4/26/2018	10:13	SE		TP	1	X												
2 PDI-SG-B322-BL1	4/26/2018	11:03	SE		TP	1	X												
3 PDI-SG-B325-BL1	4/26/2018	12:20	SE		TP	1	X												
4 PDI-SG-B327-BL1	4/26/2018	13:10	SE		TP	1	X												
5 PDI-SG-B394-BL1	4/26/2018	14:27	SE		TP	1	X												
6 PDI-SG-B401-BL1	4/26/2018	15:49	SE		TP	1	X												
7 PDI-SG-B308-BL1	4/26/2018	9:55	SE		AM	1	X												
8 PDI-SG-B313-BL1	4/26/2018	10:40	SE		AM	1	X												
9 PDI-SG-B313-BL1-D	4/26/2018	10:40	SE		AM	1	X												
0 PDI-SG-B270-BL1	4/26/2018	13:00	SE		AM	1	X												
1 PDI-SG-B276-BL1	4/26/2018	14:15	SE		AM	1	X												
2 PDI-SG-B287-BL1	4/26/2018	15:30	SE		AM	1	X												


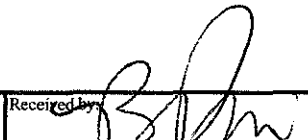


Container Type: WMG=Wide Mouth Glass Jar, P=HDPE, PP=Polypropylene, AG=amber glass, G=glass, RC=Resin Column

Preservative: HCl = Hydrochloric Acid, H3PO4 = Phosphoric Acid, HNO3 = Nitric Acid

Fraction: D = Dissolved, PRT = Particulate, T = Total (unfiltered)

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

Special Instructions/QC Requirements & Comments:
 Separate reports for each lab

Relinquished by: 	Company: RECOM	Date/Time: 4/27/18 1155	Received by: 	Company: ALY	Date/Time: 4/27/18 1155
Relinquished by: 	Company: ALY	Date/Time: 4/27/18 1300	Received by: 	Company: ALS	Date/Time: 4/27/18 1300
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

K1803942

**SURFACE SEDIMENT
CHAIN OF CUSTODY**

ALS-Environmental-Keiso
1317-S-13th-Ave
Keiso, WA 98626
Ph: 360-577-7222 Fax: 360-636-1068

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 Sediment

Project Contact: Amy Dahl / Chelsea Cook
Tel: (206) 438-2261 / (206) 438-2010

Site Contact: Jennifer Ray
Laboratory Contact: Howard-Holmes

4/25/2018

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

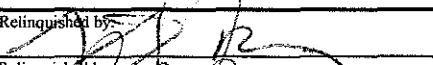
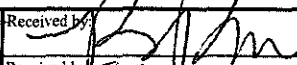
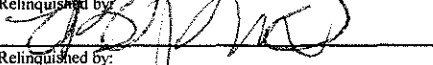
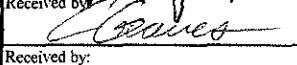
COC No:
2 of 2 COCs

Sample Identification	Sample Date	Sample Time	Matrix	QC Sample	Sampler's Initials	Total No. of Cont.	Fraction	Pesticides, PAHs, Total Solids, 1609M, 9270-SM, 1603, BEHP, TSS	WQ - Pesticides 1609M	WQ - PAHs 8270-SIM	WQ - BEHP EPA 8270D-LL	WQ - Tributyltin Krone/Unger	Sample Specific Notes:
13 PDI-SG-B295-BL1	4/26/2018	16:15	SE		AM	1		X					
14 PDI-SG-B311-BL1	4/26/2018	17:00	SE		AM	1		X					
15 PDI-SG-RB-180426-1755	4/26/2018	17:55	W		TP	8			X	X	X	X	
16 PDI-SG-RB-VVSS-042618-1750	4/26/2018	17:50	W		AM	8			X	X	X	X	

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

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

Special Instructions/QC Requirements & Comments:
Separate reports for each lab

Relinquished by: 	Company: AECOM	Date/Time: 4/27/18 1155	Received by: 	Company: HLX	Date/Time: 4/27/18 1155
Relinquished by: 	Company: HLX	Date/Time: 4/27/18 1300	Received by: 	Company: ALS	Date/Time: 4/27/18 1300
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:



PC H2

Cooler Receipt and Preservation Form

Client Aecom Service Request K18 03942
 Received: 4/27/18 Opened: 4/27/18 By: CG Unloaded: 4/27/18 By: CG

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- Samples were received in: (circle) Cooler Box Envelope Other NA
- Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number	NA	Filed
0.4	0.3	5.6	5.5	-0.1	380	1 of 2		<input checked="" type="checkbox"/>	
1.6	1.4	5.4	5.2	-0.2	379	2 of 2			

- Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
- Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
- Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Out of	Head-	Broke	pH	Reagent	Volume	Reagent Lot	Initials	Time
	Bottle Type	Temp	space				added	Number		

Notes, Discrepancies, & Resolutions: _____



Organochlorine Pesticides

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B321-BL1
Lab Code: K1803942-001

Service Request: K1803942
Date Collected: 04/26/18 10:13
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlordane	ND U	1.2	0.80	5	06/18/18 01:34	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlordane-13C10	69	5 - 144	06/18/18 01:34	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B322-BL1
Lab Code: K1803942-002

Service Request: K1803942
Date Collected: 04/26/18 11:03
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.4	0.88	5	06/18/18 02:01	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	70	5 - 144	06/18/18 02:01	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B325-BL1
Lab Code: K1803942-003

Service Request: K1803942
Date Collected: 04/26/18 12:20
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.4	0.92	5	06/18/18 02:28	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	83	5 - 144	06/18/18 02:28	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B327-BL1
Lab Code: K1803942-004

Service Request: K1803942
Date Collected: 04/26/18 13:10
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.5	1.0	5	06/18/18 02:55	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	109	5 - 144	06/18/18 02:55	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B394-BL1
Lab Code: K1803942-005

Service Request: K1803942
Date Collected: 04/26/18 14:27
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.0	0.65	5	06/18/18 03:23	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	51	5 - 144	06/18/18 03:23	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B401-BL1
Lab Code: K1803942-006

Service Request: K1803942
Date Collected: 04/26/18 15:49
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.0	0.65	5	06/18/18 03:50	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	87	5 - 144	06/18/18 03:50	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B308-BL1
Lab Code: K1803942-007

Service Request: K1803942
Date Collected: 04/26/18 09:55
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.8	1.2	5	06/18/18 04:17	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	76	5 - 144	06/18/18 04:17	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B313-BL1
Lab Code: K1803942-008

Service Request: K1803942
Date Collected: 04/26/18 10:40
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.5	0.98	5	06/18/18 04:44	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	71	5 - 144	06/18/18 04:44	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B313-BL1-D
Lab Code: K1803942-009

Service Request: K1803942
Date Collected: 04/26/18 10:40
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.5	0.98	5	06/18/18 05:12	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	102	5 - 144	06/18/18 05:12	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B270-BL1
Lab Code: K1803942-010

Service Request: K1803942
Date Collected: 04/26/18 13:00
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.0	0.67	5	06/18/18 05:39	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	99	5 - 144	06/18/18 05:39	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B276-BL1
Lab Code: K1803942-011

Service Request: K1803942
Date Collected: 04/26/18 14:15
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.0	0.66	5	06/18/18 06:07	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	91	5 - 144	06/18/18 06:07	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B287-BL1
Lab Code: K1803942-012

Service Request: K1803942
Date Collected: 04/26/18 15:30
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.1	0.73	5	06/18/18 06:34	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	54	5 - 144	06/18/18 06:34	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B295-BL1
Lab Code: K1803942-013

Service Request: K1803942
Date Collected: 04/26/18 16:15
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.1	0.72	5	06/18/18 07:02	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	82	5 - 144	06/18/18 07:02	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: PDI-SG-B311-BL1
Lab Code: K1803942-014

Service Request: K1803942
Date Collected: 04/26/18 17:00
Date Received: 04/27/18 13:00

Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	1.0	0.65	5	06/18/18 07:29	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	73	5 - 144	06/18/18 07:29	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water
Sample Name: PDI-SG-RB-180426-1755
Lab Code: K1803942-015

Service Request: K1803942
Date Collected: 04/26/18 17:55
Date Received: 04/27/18 13:00

Units: ng/L
Basis: NA

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	5.2	2.1	1	06/12/18 13:58	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	98	5 - 144	06/12/18 13:58	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water
Sample Name: PDI-SG-RB-VVSS-042618-1750
Lab Code: K1803942-016

Service Request: K1803942
Date Collected: 04/26/18 17:50
Date Received: 04/27/18 13:00

Units: ng/L
Basis: NA

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	5.4	2.2	1	06/12/18 14:26	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	78	5 - 144	06/12/18 14:26	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment
Sample Name: Method Blank
Lab Code: KQ1805507-04

Service Request: K1803942
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	0.20	0.13	1	06/17/18 23:45	5/3/18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	41	5 - 144	06/17/18 23:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ1805734-03

Service Request: K1803942
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Oxychlorane	ND U	5.0	2.0	1	06/12/18 12:36	5/3/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
S_Oxychlorane-13C10	93	5 - 144	06/12/18 12:36	

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment

Service Request: K1803942

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_Oxychlorane-13C10
		5-144
PDI-SG-B321-BL1	K1803942-001	69
PDI-SG-B322-BL1	K1803942-002	70
PDI-SG-B325-BL1	K1803942-003	83
PDI-SG-B327-BL1	K1803942-004	109
PDI-SG-B394-BL1	K1803942-005	51
PDI-SG-B401-BL1	K1803942-006	87
PDI-SG-B308-BL1	K1803942-007	76
PDI-SG-B313-BL1	K1803942-008	71
PDI-SG-B313-BL1-D	K1803942-009	102
PDI-SG-B270-BL1	K1803942-010	99
PDI-SG-B276-BL1	K1803942-011	91
PDI-SG-B287-BL1	K1803942-012	54
PDI-SG-B295-BL1	K1803942-013	82
PDI-SG-B311-BL1	K1803942-014	73
Method Blank	KQ1805507-04	41
Lab Control Sample	KQ1805507-03	108
PDI-SG-B325-BL1	KQ1805507-01	92
PDI-SG-B325-BL1	KQ1805507-02	45

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water

Service Request: K1803942

SURROGATE RECOVERY SUMMARY
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Extraction Method: EPA 3541

Sample Name	Lab Code	S_Oxychlorane-13C10
		5-144
PDI-SG-RB-180426-1755	K1803942-015	98
PDI-SG-RB-VVSS-042618-1750	K1803942-016	78
Method Blank	KQ1805734-03	93
Lab Control Sample	KQ1805734-01	95
Duplicate Lab Control Sample	KQ1805734-02	89

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QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request: K1803942
Date Analyzed: 06/12/18 11:17

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS21\Data\061218a\06122018aF008.D\
Instrument ID: K-MSMS-01
Analysis Method: ALS SOP

Lab Code: KQ1807867-01
Analysis Lot: 594432
Signal ID: 1

	Pyrene-d10	
	Area	RT
Result ==>	44,352	14.1471
Upper Limit ==>	88,703	14.65
Lower Limit ==>	22,176	13.65

Associated Analyses

Method Blank	KQ1805734-03	36704.6	14.1471
Lab Control Sample	KQ1805734-01	34031.7	14.1471
Duplicate Lab Control Sample	KQ1805734-02	33303.2	14.1471
PDI-SG-RB-180426-1755	K1803942-015	33682.2	14.1458
PDI-SG-RB-VVSS-042618-1750	K1803942-016	34272.1	14.1472

ALS Group USA, Corp.
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QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request: K1803942
Date Analyzed: 06/17/18 23:17

Internal Standard Area and RT SUMMARY
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS21\Data\061718a\06172018aF033.D\
Instrument ID: K-MSMS-01
Analysis Method: ALS SOP

Lab Code: KQ1808145-01
Analysis Lot: 595023
Signal ID: 1

Pyrene-d10		
	Area	RT
Result ==>	47,142	14.1729
Upper Limit ==>	94,284	14.67
Lower Limit ==>	23,571	13.67

Associated Analyses

Method	ID	Area	RT
Method Blank	KQ1805507-04	47295.4	14.1728
Lab Control Sample	KQ1805507-03	50222.1	14.1728
PDI-SG-B325-BL1MS	KQ1805507-01	53118	14.1728
PDI-SG-B325-BL1DMS	KQ1805507-02	51714.7	14.1728
PDI-SG-B321-BL1	K1803942-001	53793.5	14.1728
PDI-SG-B322-BL1	K1803942-002	54003.3	14.1728
PDI-SG-B325-BL1	K1803942-003	55112.2	14.1713
PDI-SG-B327-BL1	K1803942-004	56232.4	14.1728
PDI-SG-B394-BL1	K1803942-005	53007.9	14.1728
PDI-SG-B401-BL1	K1803942-006	54857.9	14.1728
PDI-SG-B308-BL1	K1803942-007	52741.3	14.1728
PDI-SG-B313-BL1	K1803942-008	58151.8	14.1728
PDI-SG-B313-BL1-D	K1803942-009	60826.8	14.1728
PDI-SG-B270-BL1	K1803942-010	60518.3	14.1728
PDI-SG-B276-BL1	K1803942-011	60880.2	14.173
PDI-SG-B287-BL1	K1803942-012	59606.9	14.1728
PDI-SG-B295-BL1	K1803942-013	59019.5	14.1728
PDI-SG-B311-BL1	K1803942-014	60802.8	14.1728

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment

Service Request: K1803942
Date Collected: 04/26/18
Date Received: 04/27/18
Date Analyzed: 06/18/18
Date Extracted: 05/3/18

Duplicate Matrix Spike Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name: PDI-SG-B325-BL1
Lab Code: K1803942-003
Analysis Method: ALS SOP
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KQ1805507-01		Duplicate Matrix Spike KQ1805507-02		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
Oxychlorane	ND U	3.65	2.81	130	4.26	2.83	150 *	53-144	15	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment

Service Request: K1803942
Date Analyzed: 06/18/18
Date Extracted: 05/03/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 595023

Lab Control Sample
KQ1805507-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Oxychlordane	2.74	2.00	137	59-141

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QA/QC Report

Client:	AECOM	Service Request:	K1803942
Project:	Portland Harbor Pre-Remedial Design Investigation/60566335	Date Analyzed:	06/12/18
Sample Matrix:	Water	Date Extracted:	05/03/18

Duplicate Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Analysis Method:	ALS SOP	Units:	ng/L
Prep Method:	EPA 3535A	Basis:	NA
		Analysis Lot:	594432

Lab Control Sample
KQ1805734-01

Duplicate Lab Control Sample
KQ1805734-02

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Oxychlordane	15.0	20.0	75 *	16.1	20.0	80	77-123	7	30

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment

Service Request: K1803942
Date Analyzed: 06/17/18 23:45
Date Extracted: 05/03/18

Method Blank Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name: Method Blank **Instrument ID:** K-MSMS-01
Lab Code: KQ1805507-04 **File ID:** J:\MS21\Data\061718a\06172018aF034.D\
Analysis Method: ALS SOP **Analysis Lot:** 595023
Prep Method: EPA 3541 **Extraction Lot:** 312837

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1805507-03	J:\MS21\Data\061718a\06172018aF035.D\	06/18/18 00:12
PDI-SG-B325-BL1MS	KQ1805507-01	J:\MS21\Data\061718a\06172018aF036.D\	06/18/18 00:39
PDI-SG-B325-BL1DMS	KQ1805507-02	J:\MS21\Data\061718a\06172018aF037.D\	06/18/18 01:06
PDI-SG-B321-BL1	K1803942-001	J:\MS21\Data\061718a\06172018aF038.D\	06/18/18 01:34
PDI-SG-B322-BL1	K1803942-002	J:\MS21\Data\061718a\06172018aF039.D\	06/18/18 02:01
PDI-SG-B325-BL1	K1803942-003	J:\MS21\Data\061718a\06172018aF040.D\	06/18/18 02:28
PDI-SG-B327-BL1	K1803942-004	J:\MS21\Data\061718a\06172018aF041.D\	06/18/18 02:55
PDI-SG-B394-BL1	K1803942-005	J:\MS21\Data\061718a\06172018aF042.D\	06/18/18 03:23
PDI-SG-B401-BL1	K1803942-006	J:\MS21\Data\061718a\06172018aF043.D\	06/18/18 03:50
PDI-SG-B308-BL1	K1803942-007	J:\MS21\Data\061718a\06172018aF044.D\	06/18/18 04:17
PDI-SG-B313-BL1	K1803942-008	J:\MS21\Data\061718a\06172018aF045.D\	06/18/18 04:44
PDI-SG-B313-BL1-D	K1803942-009	J:\MS21\Data\061718a\06172018aF046.D\	06/18/18 05:12
PDI-SG-B270-BL1	K1803942-010	J:\MS21\Data\061718a\06172018aF047.D\	06/18/18 05:39
PDI-SG-B276-BL1	K1803942-011	J:\MS21\Data\061718a\06172018aF048.D\	06/18/18 06:07
PDI-SG-B287-BL1	K1803942-012	J:\MS21\Data\061718a\06172018aF049.D\	06/18/18 06:34
PDI-SG-B295-BL1	K1803942-013	J:\MS21\Data\061718a\06172018aF050.D\	06/18/18 07:02
PDI-SG-B311-BL1	K1803942-014	J:\MS21\Data\061718a\06172018aF051.D\	06/18/18 07:29

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water

Service Request: K1803942
Date Analyzed: 06/12/18 12:36
Date Extracted: 05/03/18

Method Blank Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name: Method Blank
Lab Code: KQ1805734-03
Analysis Method: ALS SOP
Prep Method: EPA 3535A

Instrument ID: K-MSMS-01
File ID: J:\MS21\Data\061218a\06122018aF011.D\
Analysis Lot: 594432
Extraction Lot: 313114

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1805734-01	J:\MS21\Data\061218a\06122018aF012.D\ 	06/12/18 13:04
Duplicate Lab Control Sample	KQ1805734-02	J:\MS21\Data\061218a\06122018aF013.D\ 	06/12/18 13:31
PDI-SG-RB-180426-1755	K1803942-015	J:\MS21\Data\061218a\06122018aF014.D\ 	06/12/18 13:58
PDI-SG-RB-VVSS-042618-1750	K1803942-016	J:\MS21\Data\061218a\06122018aF015.D\ 	06/12/18 14:26

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment

Service Request: K1803942
Date Analyzed: 06/18/18 00:12
Date Extracted: 05/03/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name: Lab Control Sample **Instrument ID:** K-MSMS-01
Lab Code: KQ1805507-03 **File ID:** J:\MS21\Data\061718a\06172018aF035.D\
Analysis Method: ALS SOP **Analysis Lot:** 595023
Prep Method: EPA 3541 **Extraction Lot:** 312837

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1805507-04	J:\MS21\Data\061718a\06172018aF034.D\	06/17/18 23:45
PDI-SG-B325-BL1MS	KQ1805507-01	J:\MS21\Data\061718a\06172018aF036.D\	06/18/18 00:39
PDI-SG-B325-BL1DMS	KQ1805507-02	J:\MS21\Data\061718a\06172018aF037.D\	06/18/18 01:06
PDI-SG-B321-BL1	K1803942-001	J:\MS21\Data\061718a\06172018aF038.D\	06/18/18 01:34
PDI-SG-B322-BL1	K1803942-002	J:\MS21\Data\061718a\06172018aF039.D\	06/18/18 02:01
PDI-SG-B325-BL1	K1803942-003	J:\MS21\Data\061718a\06172018aF040.D\	06/18/18 02:28
PDI-SG-B327-BL1	K1803942-004	J:\MS21\Data\061718a\06172018aF041.D\	06/18/18 02:55
PDI-SG-B394-BL1	K1803942-005	J:\MS21\Data\061718a\06172018aF042.D\	06/18/18 03:23
PDI-SG-B401-BL1	K1803942-006	J:\MS21\Data\061718a\06172018aF043.D\	06/18/18 03:50
PDI-SG-B308-BL1	K1803942-007	J:\MS21\Data\061718a\06172018aF044.D\	06/18/18 04:17
PDI-SG-B313-BL1	K1803942-008	J:\MS21\Data\061718a\06172018aF045.D\	06/18/18 04:44
PDI-SG-B313-BL1-D	K1803942-009	J:\MS21\Data\061718a\06172018aF046.D\	06/18/18 05:12
PDI-SG-B270-BL1	K1803942-010	J:\MS21\Data\061718a\06172018aF047.D\	06/18/18 05:39
PDI-SG-B276-BL1	K1803942-011	J:\MS21\Data\061718a\06172018aF048.D\	06/18/18 06:07
PDI-SG-B287-BL1	K1803942-012	J:\MS21\Data\061718a\06172018aF049.D\	06/18/18 06:34
PDI-SG-B295-BL1	K1803942-013	J:\MS21\Data\061718a\06172018aF050.D\	06/18/18 07:02
PDI-SG-B311-BL1	K1803942-014	J:\MS21\Data\061718a\06172018aF051.D\	06/18/18 07:29

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QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water

Service Request: K1803942
Date Analyzed: 06/12/18 13:04
Date Extracted: 05/03/18

Lab Control Sample Summary
Organochlorine Pesticides by GC/MS/MS

Sample Name: Lab Control Sample **Instrument ID:** K-MSMS-01
Lab Code: KQ1805734-01 **File ID:** J:\MS21\Data\061218a\06122018aF012.D\
Analysis Method: ALS SOP **Analysis Lot:** 594432
Prep Method: EPA 3535A **Extraction Lot:** 313114

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1805734-03	J:\MS21\Data\061218a\06122018aF011.D\	06/12/18 12:36
Duplicate Lab Control Sample	KQ1805734-02	J:\MS21\Data\061218a\06122018aF013.D\	06/12/18 13:31
PDI-SG-RB-180426-1755	K1803942-015	J:\MS21\Data\061218a\06122018aF014.D\	06/12/18 13:58
PDI-SG-RB-VVSS-042618-1750	K1803942-016	J:\MS21\Data\061218a\06122018aF015.D\	06/12/18 14:26

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QC/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request: K1803942
Date Analyzed: 06/12/18 11:17

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS21\Data\061218a\06122018aF008.D\
Instrument ID: K-MSMS-01

Analytical Method: ALS SOP
Analysis Lot: 594432

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1807867-01	J:\MS21\Data\061218a\06122018aF008.D\	06/12/18 11:17	
Method Blank	KQ1805734-03	J:\MS21\Data\061218a\06122018aF011.D\	06/12/18 12:36	
Lab Control Sample	KQ1805734-01	J:\MS21\Data\061218a\06122018aF012.D\	06/12/18 13:04	
Duplicate Lab Control Sample	KQ1805734-02	J:\MS21\Data\061218a\06122018aF013.D\	06/12/18 13:31	
PDI-SG-RB-180426-1755	K1803942-015	J:\MS21\Data\061218a\06122018aF014.D\	06/12/18 13:58	
PDI-SG-RB-VVSS-042618-1750	K1803942-016	J:\MS21\Data\061218a\06122018aF015.D\	06/12/18 14:26	

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QC/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request: K1803942
Date Analyzed: 06/17/18 23:17

Tune Summary
Organochlorine Pesticides by GC/MS/MS

File ID: J:\MS21\Data\061718a\06172018aF033.D\
Instrument ID: K-MSMS-01

Analytical Method: ALS SOP
Analysis Lot: 595023

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	KQ1808145-01	J:\MS21\Data\061718a\06172018aF033.D\	06/17/18 23:17	
Method Blank	KQ1805507-04	J:\MS21\Data\061718a\06172018aF034.D\	06/17/18 23:45	
Lab Control Sample	KQ1805507-03	J:\MS21\Data\061718a\06172018aF035.D\	06/18/18 00:12	
PDI-SG-B325-BL1	KQ1805507-01	J:\MS21\Data\061718a\06172018aF036.D\	06/18/18 00:39	
PDI-SG-B325-BL1	KQ1805507-02	J:\MS21\Data\061718a\06172018aF037.D\	06/18/18 01:06	
PDI-SG-B321-BL1	K1803942-001	J:\MS21\Data\061718a\06172018aF038.D\	06/18/18 01:34	
PDI-SG-B322-BL1	K1803942-002	J:\MS21\Data\061718a\06172018aF039.D\	06/18/18 02:01	
PDI-SG-B325-BL1	K1803942-003	J:\MS21\Data\061718a\06172018aF040.D\	06/18/18 02:28	
PDI-SG-B327-BL1	K1803942-004	J:\MS21\Data\061718a\06172018aF041.D\	06/18/18 02:55	
PDI-SG-B394-BL1	K1803942-005	J:\MS21\Data\061718a\06172018aF042.D\	06/18/18 03:23	
PDI-SG-B401-BL1	K1803942-006	J:\MS21\Data\061718a\06172018aF043.D\	06/18/18 03:50	
PDI-SG-B308-BL1	K1803942-007	J:\MS21\Data\061718a\06172018aF044.D\	06/18/18 04:17	
PDI-SG-B313-BL1	K1803942-008	J:\MS21\Data\061718a\06172018aF045.D\	06/18/18 04:44	
PDI-SG-B313-BL1-D	K1803942-009	J:\MS21\Data\061718a\06172018aF046.D\	06/18/18 05:12	
PDI-SG-B270-BL1	K1803942-010	J:\MS21\Data\061718a\06172018aF047.D\	06/18/18 05:39	
PDI-SG-B276-BL1	K1803942-011	J:\MS21\Data\061718a\06172018aF048.D\	06/18/18 06:07	
PDI-SG-B287-BL1	K1803942-012	J:\MS21\Data\061718a\06172018aF049.D\	06/18/18 06:34	
PDI-SG-B295-BL1	K1803942-013	J:\MS21\Data\061718a\06172018aF050.D\	06/18/18 07:02	
PDI-SG-B311-BL1	K1803942-014	J:\MS21\Data\061718a\06172018aF051.D\	06/18/18 07:29	

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QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation

Service Request: K1803942
Calibration Date: 6/14/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1800293
Instrument ID: K-MSMS-01

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800293-01		J:\MS21\Data\061418\061418F004.D	06/14/2018 10:33
02	KC1800293-02		J:\MS21\Data\061418\061418F005.D	06/14/2018 11:00
03	KC1800293-03		J:\MS21\Data\061418\061418F006.D	06/14/2018 11:27
04	KC1800293-04		J:\MS21\Data\061418\061418F007.D	06/14/2018 11:55
05	KC1800293-05		J:\MS21\Data\061418\061418F008.D	06/14/2018 12:22
06	KC1800293-06		J:\MS21\Data\061418\061418F009.D	06/14/2018 12:49
07	KC1800293-07		J:\MS21\Data\061418\061418F010.D	06/14/2018 13:17
08	KC1800293-08		J:\MS21\Data\061418\061418F011.D	06/14/2018 13:44
09	KC1800293-09		J:\MS21\Data\061418\061418F012.D	06/14/2018 14:11
10	KC1800293-10		J:\MS21\Data\061418\061418F013.D	06/14/2018 14:39

Analyte

Oxychlorane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	0.7929	02	1.0	0.7168	03	2.0	0.6631	04	5.0	1.052
05	10	0.8345	06	20	0.9041	07	40	0.8652	08	60	0.8696
09	80	0.7456	10	100	0.7894						

S_Oxychlorane-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.1039	02	20	0.09224	03	20	0.1103	04	20	0.09972
05	20	0.1086	06	20	0.1036	07	20	0.09542	08	20	0.1025
09	20	0.117	10	20	0.1109						

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation

Service Request: K1803942
Calibration Date: 6/14/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1800293
Instrument ID: K-MSMS-01

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Oxychlorane	TRG	Average RF	% RSD	13.3	20	0.8233	0.01
S_Oxychlorane-13C10	SURR	Average RF	% RSD	7.2		0.1044	0.01

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation

Service Request: K1803942
Calibration Date: 6/11/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1800295
Instrument ID: K-MSMS-01

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800295-01		J:\MS21\Data\061118\061118F004.D	06/11/2018 19:16
02	KC1800295-02		J:\MS21\Data\061118\061118F005.D	06/11/2018 19:43
03	KC1800295-03		J:\MS21\Data\061118\061118F006.D	06/11/2018 20:10
04	KC1800295-04		J:\MS21\Data\061118\061118F007.D	06/11/2018 20:37
05	KC1800295-05		J:\MS21\Data\061118\061118F008.D	06/11/2018 21:05
06	KC1800295-06		J:\MS21\Data\061118\061118F009.D	06/11/2018 21:32
07	KC1800295-07		J:\MS21\Data\061118\061118F010.D	06/11/2018 21:59
08	KC1800295-08		J:\MS21\Data\061118\061118F011.D	06/11/2018 22:27
09	KC1800295-09		J:\MS21\Data\061118\061118F012.D	06/11/2018 22:54
10	KC1800295-10		J:\MS21\Data\061118\061118F013.D	06/11/2018 23:21

Analyte

Oxychlorane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.5	1.132	02	1.0	0.7272	03	2.0	1.025	04	5.0	1.24
05	10	0.9236	06	20	0.897	07	40	0.8858	08	60	1.138
09	80	0.8362	10	100	1.122						

S_Oxychlorane-13C10

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	20	0.0877	02	20	0.09161	03	20	0.09044	04	20	0.09267
05	20	0.0875	06	20	0.08949	07	20	0.08752	08	20	0.07961
09	20	0.08994	10	20	0.07903						

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation

Service Request: K1803942
Calibration Date: 6/11/2018

Initial Calibration Summary
Organochlorine Pesticides by GC/MS/MS

Calibration ID: KC1800295
Instrument ID: K-MSMS-01

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Oxychlorane	TRG	Average RF	% RSD	16.4	20	0.9928	0.01
S_Oxychlorane-13C10	SURR	Average RF	% RSD	5.3		0.08755	0.01

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation

Service Request: K1803942
Calibration Date: 6/14/2018

**Initial Calibration Verification Summary
Organochlorine Pesticides by GC/MS/MS**

Calibration ID: KC1800293
Instrument ID: K-MSMS-01

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800293-11		J:\MS21\Data\061418\061418F014.D	06/14/2018 15:06

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Oxychlordanane	20.0	21.1	8.233E-1	8.687E-1	5.52	±25	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
S_Oxychlordanane-13C10	20.0	20.5	1.044E-1	1.073E-1	103	50-200	Average RF

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation

Service Request: K1803942
Calibration Date: 6/11/2018

**Initial Calibration Verification Summary
Organochlorine Pesticides by GC/MS/MS**

Calibration ID: KC1800295
Instrument ID: K-MSMS-01

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
11	KC1800295-11		J:\MS21\Data\061118\061118F014.D	06/11/2018 23:48

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Oxychlorane	20.0	22.1	9.928E-1	1.095E0	10.35	±25	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	Rec.	Criteria	Curve Fit
S_Oxychlorane-13C10	20.0	20.1	8.755E-2	8.787E-2	101	50-200	Average RF

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request: K1803942
Date Analyzed: 06/12/18 11:17

**Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS**

Analysis Method: ALS SOP
File ID: J:\MS21\Data\061218a\06122018aF008.D\
Signal ID: 1

Calibration Date: 6/11/2018
Calibration ID: KC1800295
Analysis Lot: 594432
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Oxychlordane	20.0	19.9	0.9928	0.9855	-0.7	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_Oxychlordane-13C10	20.0	21.5	0.0876	0.0943	108	NA	50-200	Average RF

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request: K1803942
Date Analyzed: 06/17/18 23:17

**Continuing Calibration Verification (CCV) Summary
Organochlorine Pesticides by GC/MS/MS**

Analysis Method: ALS SOP
File ID: J:\MS21\Data\061718a\06172018aF033.D\
Signal ID: 1

Calibration Date: 6/14/2018
Calibration ID: KC1800293
Analysis Lot: 595023
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
Oxychlordane	20.0	26.0	0.8233	1.071	30.1*	NA	±25	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
S_Oxychlordane-13C10	20.0	23.0	0.1044	0.1203	115	NA	50-200	Average RF

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QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request:K1803942

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP

Analysis Lot:594432
Instrument ID:K-MSMS-01

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS21\Data\061218a\06122018aF008.D\	Continuing Calibration Verification	KQ1807867-01	6/12/2018	11:17:22	
J:\MS21\Data\061218a\06122018aF008.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	11:17:22	
J:\MS21\Data\061218a\06122018aF011.D\	Method Blank	KQ1805734-03	6/12/2018	12:36:35	
J:\MS21\Data\061218a\06122018aF012.D\	Lab Control Sample	KQ1805734-01	6/12/2018	13:04:29	
J:\MS21\Data\061218a\06122018aF013.D\	Duplicate Lab Control Sample	KQ1805734-02	6/12/2018	13:31:44	
J:\MS21\Data\061218a\06122018aF014.D\	PDI-SG-RB-180426-1755	K1803942-015	6/12/2018	13:58:57	
J:\MS21\Data\061218a\06122018aF015.D\	PDI-SG-RB-VVSS-042618-1750	K1803942-016	6/12/2018	14:26:11	
J:\MS21\Data\061218a\06122018aF016.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	14:53:23	
J:\MS21\Data\061218a\06122018aF017.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	15:20:47	
J:\MS21\Data\061218a\06122018aF018.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	15:48:02	
J:\MS21\Data\061218a\06122018aF019.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	16:15:16	
J:\MS21\Data\061218a\06122018aF020.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	16:42:30	
J:\MS21\Data\061218a\06122018aF021.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	17:09:43	
J:\MS21\Data\061218a\06122018aF022.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	17:37:26	
J:\MS21\Data\061218a\06122018aF023.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	18:05:24	
J:\MS21\Data\061218a\06122018aF024.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	18:32:38	
J:\MS21\Data\061218a\06122018aF025.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	18:59:51	
J:\MS21\Data\061218a\06122018aF026.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	19:27:38	
J:\MS21\Data\061218a\06122018aF027.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	19:54:51	
J:\MS21\Data\061218a\06122018aF028.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	20:22:46	
J:\MS21\Data\061218a\06122018aF029.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	20:50:02	
J:\MS21\Data\061218a\06122018aF030.D\	ZZZZZZZ	ZZZZZZZ	6/12/2018	21:17:17	

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QA/QC Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335

Service Request:K1803942

Analysis Run Log
Organochlorine Pesticides by GC/MS/MS

Analysis Method: ALS SOP

Analysis Lot:595023

Instrument ID:K-MSMS-01

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\MS21\Data\061718a\06172018aF033.D\	Continuing Calibration Verification	KQ1808145-01	6/17/2018	23:17:46	
J:\MS21\Data\061718a\06172018aF034.D\	Method Blank	KQ1805507-04	6/17/2018	23:45:01	*
J:\MS21\Data\061718a\06172018aF035.D\	Lab Control Sample	KQ1805507-03	6/18/2018	00:12:15	*
J:\MS21\Data\061718a\06172018aF036.D\	PDI-SG-B325-BL1 MS	KQ1805507-01	6/18/2018	00:39:40	*
J:\MS21\Data\061718a\06172018aF037.D\	PDI-SG-B325-BL1 DMS	KQ1805507-02	6/18/2018	01:06:56	*
J:\MS21\Data\061718a\06172018aF038.D\	PDI-SG-B321-BL1	K1803942-001	6/18/2018	01:34:10	*
J:\MS21\Data\061718a\06172018aF039.D\	PDI-SG-B322-BL1	K1803942-002	6/18/2018	02:01:25	*
J:\MS21\Data\061718a\06172018aF040.D\	PDI-SG-B325-BL1	K1803942-003	6/18/2018	02:28:39	*
J:\MS21\Data\061718a\06172018aF041.D\	PDI-SG-B327-BL1	K1803942-004	6/18/2018	02:55:53	*
J:\MS21\Data\061718a\06172018aF042.D\	PDI-SG-B394-BL1	K1803942-005	6/18/2018	03:23:06	*
J:\MS21\Data\061718a\06172018aF043.D\	PDI-SG-B401-BL1	K1803942-006	6/18/2018	03:50:20	*
J:\MS21\Data\061718a\06172018aF044.D\	PDI-SG-B308-BL1	K1803942-007	6/18/2018	04:17:34	*
J:\MS21\Data\061718a\06172018aF045.D\	PDI-SG-B313-BL1	K1803942-008	6/18/2018	04:44:50	*
J:\MS21\Data\061718a\06172018aF046.D\	PDI-SG-B313-BL1-D	K1803942-009	6/18/2018	05:12:09	*
J:\MS21\Data\061718a\06172018aF047.D\	PDI-SG-B270-BL1	K1803942-010	6/18/2018	05:39:23	*
J:\MS21\Data\061718a\06172018aF048.D\	PDI-SG-B276-BL1	K1803942-011	6/18/2018	06:07:38	*
J:\MS21\Data\061718a\06172018aF049.D\	PDI-SG-B287-BL1	K1803942-012	6/18/2018	06:34:54	*
J:\MS21\Data\061718a\06172018aF050.D\	PDI-SG-B295-BL1	K1803942-013	6/18/2018	07:02:10	*
J:\MS21\Data\061718a\06172018aF051.D\	PDI-SG-B311-BL1	K1803942-014	6/18/2018	07:29:24	*
J:\MS21\Data\061718\06172018F052.D\	ZZZZZZZ	ZZZZZZZ	6/18/2018	07:57:00	
J:\MS21\Data\061718\06172018F053.D\	ZZZZZZZ	ZZZZZZZ	6/18/2018	08:24:20	

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Prep Summary Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Sediment

Service Request: K1803942

Organochlorine Pesticides by GC/MS/MS

Prep Method: EPA 3541
Analytical Method: ALS SOP

Extraction Lot: 312837
Extraction Date: 05/03/18 04:15

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
PDI-SG-B321-BL1	K1803942-001	4/26/18	4/27/18	20.245 g	1 mL	40.6
PDI-SG-B322-BL1	K1803942-002	4/26/18	4/27/18	20.115 g	1 mL	36.8
PDI-SG-B325-BL1	K1803942-003	4/26/18	4/27/18	20.388 g	1 mL	34.9
PDI-SG-B327-BL1	K1803942-004	4/26/18	4/27/18	20.027 g	1 mL	32.6
PDI-SG-B394-BL1	K1803942-005	4/26/18	4/27/18	20.092 g	1 mL	50.0
PDI-SG-B401-BL1	K1803942-006	4/26/18	4/27/18	20.321 g	1 mL	53.6
PDI-SG-B308-BL1	K1803942-007	4/26/18	4/27/18	20.247 g	1 mL	28.1
PDI-SG-B313-BL1	K1803942-008	4/26/18	4/27/18	20.253 g	1 mL	32.8
PDI-SG-B313-BL1-D	K1803942-009	4/26/18	4/27/18	20.202 g	1 mL	33.0
PDI-SG-B270-BL1	K1803942-010	4/26/18	4/27/18	20.176 g	1 mL	48.4
PDI-SG-B276-BL1	K1803942-011	4/26/18	4/27/18	20.343 g	1 mL	48.7
PDI-SG-B287-BL1	K1803942-012	4/26/18	4/27/18	20.286 g	1 mL	44.5
PDI-SG-B295-BL1	K1803942-013	4/26/18	4/27/18	20.433 g	1 mL	44.2
PDI-SG-B311-BL1	K1803942-014	4/26/18	4/27/18	20.416 g	1 mL	70.4
Matrix Spike	KQ1805507-01MS	4/26/18	4/27/18	20.406 g	1 mL	34.9
Duplicate Matrix Spike	KQ1805507-02DMS	4/26/18	4/27/18	20.251 g	1 mL	34.9
Lab Control Sample	KQ1805507-03LCS	NA	NA	10 g	1 mL	
Method Blank	KQ1805507-04MB	NA	NA	20.4330 g	1 mL	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: AECOM
Project: Portland Harbor Pre-Remedial Design Investigation/60566335
Sample Matrix: Water

Service Request: K1803942

Organochlorine Pesticides by GC/MS/MS

Prep Method: EPA 3535A
Analytical Method: ALS SOP

Extraction Lot: 313114
Extraction Date: 05/03/18 08:48

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
PDI-SG-RB-180426-1755	K1803942-015	4/26/18	4/27/18	960.0000 mL	1 mL	
PDI-SG-RB-VVSS-042618-1750	K1803942-016	4/26/18	4/27/18	930.0000 mL	1 mL	
Lab Control Sample	KQ1805734-01LCS	NA	NA	1000 mL	1 mL	
Duplicate Lab Control Sample	KQ1805734-02DLCS	NA	NA	1000 mL	1 mL	
Method Blank	KQ1805734-03MB	NA	NA	1000 mL	1 mL	