

# Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling  
 Portland Harbor Superfund Site  
 Surface Water – November 2018

Laboratory: ALS Environmental, Kelso, WA

Laboratory Group: K1811632

Analyses/Method: Tributyltin, bis(2-Ethylhexyl)phthalate, and Pentachlorophenol (PCP)

Validation Level: Stage 2

AECOM Project

Number: 60566335 Task #2.12

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File Name: K1811632 DVR

## SUMMARY

The data quality review of 5 surface water samples and one rinsate blank collected between November 27 and November 29, 2018, has been completed. The samples were analyzed for tributyltin by Unger et al. and low-level bis(2-ethylhexyl)phthalate and PCP by EPA Method 8270D by ALS Environmental (ALS) located in Kelso, Washington. The analyses were performed in general accordance with the methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)* and Unger, MA et al., *Determination of Butyltins in Natural Waters by Flame Photometric Detection of Hexane Derivatives and Mass Spectrometric Confirmation, Chemosphere, 1886,16(4):461-470*. The laboratory provided level 2 and level 4 data packages containing sample results and associated quality assurance (QA) and quality control (QC) data, preparation logs, and raw instrument outputs (where applicable). The following samples were associated with laboratory group K1811632:

Sample ID	Laboratory ID
PDI-WS-T05-1811	K1811632-001
PDI-WS-T01-1811	K1811632-002
PDI-WS-T01-1811D	K1811632-003
PDI-WS-T03-1811	K1811632-004
PDI-WS-T07-1811	K1811632-005
PDI-RB-PP-181129	K1811632-006

Data validation is based on method performance criteria and QC criteria documented in the *Quality Assurance Project Plan (QAPP)*, dated March 23, 2018, as amended. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA document *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, January 2017. Data qualifiers assigned to results reported in this sample set are included in Table 1.

## SAMPLE RECEIPT

Upon receipt by ALS, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperatures were recorded. No discrepancies related to sample identification were noted by ALS and the coolers were received at temperatures within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C.



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The sample identification for PDI-WS-T01-1811D did not include the dash (-). The dash was added to the identification in the database (PDI-WS-T01-1811-D) at a later date.

**ORGANIC ANALYSES**

Samples were analyzed for tributyltin, bis(2-ethylhexyl)phthalate, and PCP by the methods identified in the introduction of this report.

1. Holding Times – Acceptable
2. Blanks – Acceptable except as noted below:

General – One rinsate blank was reported with this laboratory group. bis(2-Ethylhexyl)phthalate (0.17 ug/L) was detected in the rinsate blank at a concentration between the method detection limit (MDL) and the reporting limit. bis(2-Ethylhexyl)phthalate was detected in PDI-WS-T05-1811 at a concentration between the reporting limit and the MDL; therefore, this result was qualified as not detected and flagged 'U' at the reporting limit.

3. Surrogates – Acceptable
4. Laboratory Control Sample (LCS) – Acceptable
5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable

Tributyl Tin by Unger et al. – An MS/MSD was performed using PDI-WS-T03-1811. Results were acceptable.

bis(2-Ethylhexyl)phthalate and PCP by EPA 8270D – An MS/MSD was performed using PDI-WS-T03-1811. Results were acceptable.

6. Field Duplicate – Acceptable

A field duplicate was submitted for PDI-WS-T01-1811 and identified as PDI-WS-T01-1811D. Results were comparable.

7. Reporting Limits – Acceptable except as noted below:

bis(2-ethylhexyl)phthalate and PCP by EPA 8270D – The result for bis(2-ethylhexyl)phthalate in PDI-WS-T05-1811 was flagged 'J' by the laboratory to indicate the reported concentration was above the MDL but below the reporting limit. The result for bis(2-ethylhexyl)phthalate in this sample was flagged 'U' based on the rinsate blank result. Laboratory 'J'-flagged results are considered estimated. As the result is between the MDL and the reporting limit, there is a greater level of uncertainty associated with the numerical result.

**OVERALL ASSESSMENT OF DATA**

The data reported in this laboratory group, as qualified, is considered usable for meeting project objectives. The completeness for laboratory group K1811632 is 100%.

**Table 1**  
**QA/QC Data Summary Review**  
**Portland Harbor**  
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Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
PDI-WS-T05-1811	K1811632-001	SW8270D	bis(2-Ethylhexyl)phthalate	0.14 J	ug/L	1.0 U	bf

**Notes:**

bf - field blank contamination

J - estimated value

U - Compound was analyzed for, but not detected above the value shown.

ug/L - microgram per liter

Note: Line items where the laboratory result contains a "J" and the final result contains a "U" with a data validation reason code "bf" indicate that the final result is reported as not detected ("U" flag) at the reporting limit.