

# Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling  
 Portland Harbor Superfund Site  
 Surface Sediment – Downtown/Upriver Reaches

Laboratory: ALS Environmental, Kelso, WA

Laboratory Group: K1806174

Analyses/Method: Chlorinated Pesticides and Total Solids

Validation Level: Stage 2A

AECOM Project

Number: 60566335 Task #2.12

Prepared by: Lucy Panteleeff/AECOM

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Reviewed by: Jennifer Garner/AECOM

File Name: K1806174 DVR

## SUMMARY

The data quality review of 3 surface sediment samples collected on June 28, 2018, has been completed. The samples were analyzed for chlorinated pesticides by EPA Method 1699-modified (GC/MS/MS) and total solids by EPA Method 160.3-modified at ALS Environmental (ALS) located in Kelso, Washington. The analyses were performed in general accordance with the methods specified in EPA's *Method 1699: Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS*, December 2007 (modified by ALS SOP SVM-PESTMS2) and *Methods for Chemical Analysis of Water and Wastes*, March 1983. 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 K1806174:

Sample ID	Laboratory ID
PDI-SG-B430	K1806174-001
PDI-SG-B431	K1806174-002
PDI-SG-B432	K1806174-003

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 documents *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, January 2017, and *USEPA National Functional Guidelines for Inorganic 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 temperature was recorded. No discrepancies related to sample identification were noted by ALS and the cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. The samples were received by the laboratory on June 29, 2018, and placed on frozen hold. Samples PDI-SG-B430 and PDI-SG-B432 were authorized for analysis on August 16, 2018. Sample PDI-SG-B431 was indicated on the COC, but analysis for this sample was cancelled. This sample was re-collected and submitted to the laboratory under separate cover.

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## ORGANIC ANALYSIS

The samples were analyzed for chlorinated pesticides by EPA Method 1699-modified.

1. Holding Times – Acceptable except as noted below:

Samples PDI-SG-430 and PDI-SG-B432 were extracted 38 days past the method-recommended holding time of 14 days after sample collection. Per ALS-Kelso protocol, the samples were frozen in archive until extraction and were thawed for less than 14 days; therefore, the samples were not extracted outside the holding time.

2. Initial and Continuing Calibration Verifications – Acceptable

3. Blanks – Acceptable except as noted below:

A rinsate blank was not submitted with this laboratory group. The associated rinsate blank was reported under separate cover. Target compounds may have been detected in the rinsate blank associated with these samples. Data were not qualified based on rinsate blank results.

4. Surrogates – Acceptable

5. Internal Standards – Acceptable except as noted below:

The internal standard area counts for pyrene-d10 in PDI-SG-430, PDI-SG-B432, and the associated laboratory control sample, matrix spike, and matrix spike duplicate exceeded the control limits of 50-200% (high). Pyrene-d10 is only associated with the labelled surrogate compound recoveries which were within control limits in the samples and quality control samples noted above; therefore, data were not qualified based on these internal standard outliers.

6. Laboratory Control Sample (LCS) – Acceptable

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

An MS/MSD was performed using PDI-SG-B463 (laboratory group K1806305, discussed under separate cover). Data in this laboratory group were not qualified based on these MS/MSD results. Qualification, if any, is discussed in the associated data validation report.

8. Reporting Limits – Acceptable except as noted below:

The results for gamma-chlordane and trans-nonachlor in PDI-SG-B432 were flagged 'J' by the laboratory to indicate the reported concentrations were above the method detection limits (MDLs) but below the reporting limits. 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.

The reporting limits for one or more chlorinated pesticides reported as not detected in these sediment samples were elevated due to the moisture content and/or lower extraction volume used due to matrix interference. The reporting limits and MDLs for dieldrin exceeded the cleanup level in all sediment samples reported in laboratory group K1806174.



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**CONVENTIONAL ANALYSIS**

The samples were analyzed for total solids by EPA Method 160.3-modified.

1. Holding Times – Acceptable
2. Laboratory Duplicate – Acceptable

A laboratory duplicate was performed using three samples from projects unrelated to the Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling project. Results were comparable.

3. Reporting Limits – Acceptable

**OVERALL ASSESSMENT OF DATA**

The data reported in this laboratory group is considered usable for meeting project objectives. The completeness for laboratory group K1806174 is 100%.

**Table 1**  
**QA/QC Data Summary Review**  
**Portland Harbor**  
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**ALS - Kelso Laboratory Group: K1806174**

<b>Sample ID</b>	<b>Laboratory ID</b>	<b>Method</b>	<b>Analyte</b>	<b>Laboratory Result</b>	<b>Units</b>	<b>Final Result</b>	<b>Reason Code</b>
<b>No data qualifiers were assigned to results reported in K1806174 based on this data validation.</b>							