

Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
 Portland Harbor Superfund Site
 Surface Sediment – Stratified Random

Laboratory: ALS Environmental, Kelso, WA

Laboratory Group: K1805971

Analyses/Method: Chlorinated Pesticides and Total Solids

Validation Level: Stage 2A

AECOM Project

Number: 60566335 Task #2.12

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File Name: K1805971 DVR

SUMMARY

The data quality review of 6 surface sediment samples collected between June 22 and June 24, 2018, has been completed. 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 are associated with laboratory group K1805971:

Sample ID	Laboratory ID
PDI-SG-B274-BL1	K1805971-001
PDI-SG-B285-BL1	K1805971-002
PDI-SG-B272-BL1	K1805971-003
PDI-SG-B281-BL1	K1805971-004
PDI-SG-B278-BL1	K1805971-005
PDI-SG-B259-BL1	K1805971-006

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 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 below the EPA-recommended limits of greater than 0°C and less than or equal to 6°C at -0.4°C. The laboratory did not indicate that any samples

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were received frozen or that any sample containers were compromised; therefore, no data were qualified based on the low cooler temperature.

ORGANIC ANALYSIS

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

1. Holding Times – Acceptable except as noted below:

Samples in this laboratory group were extracted 23 to 25 days past the method-recommended holding time of 14 days after sample collection. Upon receipt by ALS-Kelso the samples were frozen until extraction and thawed for less than 14 days; therefore, the samples were not extracted outside the holding time.

2. Initial and Continuing Calibration Verifications – Acceptable except as noted below:

The percent differences for one or more analytes were outside the control limit of $\pm 25\%$ in the continuing calibration verifications (CCVs) analyzed on July 3, 2018. The CCVs were associated only with batch QC; therefore, data were not qualified based on these CCV results. All CCVs associated with the samples reported in this laboratory group were acceptable.

3. Blanks – Acceptable except as noted below:

One rinsate blank was collected on June 30, 2018, was reported with laboratory group K1806207 (ID K1806207-026), and is applicable to the samples collected in this laboratory group. One or more analytes may have been detected in the rinsate blank and one or more of these analytes may have been qualified as not detected based on the associated method blank results. Refer to the associated data validation memorandum for further information. Sediment data were not qualified based on rinsate blank detections.

4. Surrogates – Acceptable except as noted below:

Due to a laboratory information management system error, surrogate recoveries for samples associated with QC not associated with this laboratory group were reported with this data set. The surrogates heptachlorepox-13C10 and oxychlordan-13C10 were reported as not recovered from these samples. No data reported in this laboratory group were qualified based on sample surrogate recoveries reported in other laboratory groups.

5. Internal Standards – Acceptable where applicable

6. Laboratory Control Sample (LCS) – Acceptable except as noted below:

The percent recovery for cis-nonachlor (162%) exceeded the control limits of 69-134% in the LCS extracted on July 31, 2018. cis-Nonachlor was not detected in the associated samples; therefore, data were not qualified based this elevated LCS result.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable except as noted below:

An MS/MSD was performed using PDI-SG-B278-BL1. The percent recovery for cis-nonachlor in the MSD (154%) exceeded the control limits of 27-144%. The percent recovery for cis-nonachlor in the MS and the relative percent difference for the MS/MSD pair were



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acceptable; therefore, data were not qualified based on this MSD result.

8. Reporting Limits – Acceptable except as noted below:

One or more results were flagged 'J' by the laboratory to indicate the reported concentrations were above the 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 pesticides reported as not detected in multiple samples were elevated due to the moisture content and/or dilution due to matrix interference. The reporting limits and MDLs for dieldrin exceeded the cleanup level in all sediment samples reported in laboratory group K1805971.

CONVENTIONAL ANALYSIS

Soil 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 PDI-SG-B274-BL1. 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 K1805971 is 100%.

Table 1
QA/QC Data Summary Review
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Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
No data qualifiers were assigned to results reported in K1805971 based on this data validation.							