

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: K1806650

Analyses/Method: Chlorinated Pesticides

Validation Level: Stage 2A

AECOM Project

Number: 60566335 Task #2.12

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Completed on: September 26, 2018

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File Name: K1806650 DVR

SUMMARY

The data quality review of one rinsate blank collected on July 13, 2018, has been completed. The sample was analyzed for chlorinated pesticides by EPA Method 1699-modified (GC/MS/MS) at ALS Environmental (ALS) located in Kelso, Washington. The analysis was performed in general accordance with the method 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). 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 sample was associated with laboratory group K1806650:

Sample ID	Laboratory ID
PDI-RB-VV-20180713 (rinsate blank)	K1806650-001

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 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.

ORGANIC ANALYSIS

The sample was analyzed for chlorinated pesticides by EPA Method 1699-modified.

1. Holding Times – Acceptable
2. Initial and Continuing Calibration Verifications – Acceptable
3. Blanks – Acceptable

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4. Surrogates – Acceptable

The percent recovery for the surrogate 4,4-DDD-d4 (125%) exceeded the control limits of 5-120% in PDI-RB-VV-20180713. The results for 2,4'-DDD, 2,4'-DDE, 4,4'-DDD, and 4,4'-DDE in PDI-RB- VV-20180713 were qualified as estimated and flagged 'UJ' based on this surrogate recovery.

5. Internal Standards – Acceptable

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

The percent recoveries for the following analytes in the LCS/LCSD extracted on July 19, 2018, were outside the control limits:

Analyte	LCS	LCSD	Control Limits	RPD CL = 30%
2,4'-DDE	74%	69%	75-117%	ok
4,4'-DDT	114%	ok	85-113%	ok
alpha-Chlordane	140%	ok	69-130%	ok
cis-Nonachlor	210%	169%	59-138%	ok
gamma-Chlordane	128%	ok	72-127%	ok
Heptachlor	118%	119%	81-115%	ok
trans-Nonachlor	161%	ok	72-127%	35%

ok – acceptable CL – control limits

The result for 2,4'-DDE in PDI-RB-VV-20180713 was qualified as estimated based on surrogate recovery as described in Section 4; therefore, no further qualification based on the LCS/LCSD results was necessary. All other chlorinated pesticides listed in the table above were either reported as not detected in the associated sample or two of the three quality control parameters (LCS, LCSD, and/or relative percent difference [RPD]) were acceptable; therefore, data were not qualified for these analytes based on these LCS/LCSD results.

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

An MS/MSD was not performed in association with this rinsate blank sample. Precision and accuracy were assessed using the LCS/LCSD results.

8. Reporting Limits – Acceptable except as noted below:

The reporting limits for one or more chlorinated pesticides were slightly elevated due to limited sample volume. The elevated reporting limits do not affect the use of the data.

OVERALL ASSESSMENT OF DATA

The data reported in this laboratory group is considered usable for meeting project objectives. The completeness for laboratory group K1806650 is 100%.

Table 1
QA/QC Data Summary Review
Portland Harbor
Surface Sediment - Downtown/Upriver Reaches
ALS Kelso Laboratory Group: K1806650

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
PDI-RB-VV-20180713	K1806650-001	CWA1699M	2,4'-DDD	0.51 U	ng/L	0.51 UJ	s
PDI-RB-VV-20180713	K1806650-001	CWA1699M	2,4'-DDE	0.51 U	ng/L	0.51 UJ	s
PDI-RB-VV-20180713	K1806650-001	CWA1699M	4,4'-DDD	0.51 U	ng/L	0.51 UJ	s
PDI-RB-VV-20180713	K1806650-001	CWA1699M	4,4'-DDE	0.51 U	ng/L	0.51 UJ	s

Notes:

J - estimated value

ng/L - nanogram per liter

s - surrogate recovery

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