

Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
 Portland Harbor Superfund Site
 Standard Reference Material

Laboratory: ALS Environmental, Kelso, WA

Laboratory Group: K1806131

Analyses/Method: Chlorinated Pesticides and Polycyclic Aromatic Hydrocarbons (PAHs)

Validation Level: Stage 4

AECOM Project

Number: 60566335 Task #2.12

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File Name: K1806131 DVR

SUMMARY

The data quality review of 1 National Institute of Standards and Technology (NIST) standard reference material (SRM) received by the laboratory on June 28, 2018, has been completed. The sample was analyzed for chlorinated pesticides by EPA Method 1699-modified (GC/MS/MS) and PAHs by EPA Method 8270D modified by selected ion monitoring (SIM), at 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 *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 samples are associated with laboratory group K1806131:

Sample ID	Laboratory ID
OC Pest-SRM 1944	K1806131-001

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 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 this sample set are included in Table 1.

SAMPLE RECEIPT

The sample was received by ALS in good condition.

ORGANIC ANALYSES

The sample was analyzed for chlorinated pesticides and PAHs by the methods identified in the introduction to this report.

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

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3. Blanks – Acceptable except as noted below:

PAHs by EPA Method 8270D-SIM – 2-Methylnaphthalene (0.053 ug/kg) and phenanthrene (0.036 ug/kg) were detected in the method blank extracted on July 6, 2018, at concentrations between the method detection limits (MDLs) and the reporting limits. The results for 2-methylnaphthalene and phenanthrene were reported at concentrations significantly higher than the method blank concentrations in the associated sample; therefore, data were not qualified based on these method blank results.

4. Surrogates – Acceptable

5. Internal Standards – Acceptable except as noted below:

Chlorinated Pesticides by EPA Method 1699-modified – The internal standard area count for pyrene-d10 (high) in the dilution performed on OC Pest-SRM 1944 was outside the control limits of 50-200% due to matrix interference. As only surrogate recoveries are associated with this internal standard, data were not qualified in this sample based on the internal standard area count.

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

Chlorinated Pesticides by EPA Method 1699-modified – The percent recoveries for the following analytes in the LCS/LCSD extracted on July 3, 2018, exceeded the control limits:

Analyte	LCS	LCSD	Control limits
2,4'-DDT	133%	146%	77-118%
4,4'-DDT	125%	127%	78-116%
cis-Nonachlor	160%	ok	69-134%

ok – acceptable

2,4'-DDT was not detected in the associated sample; therefore, data were not qualified for this analyte based on the elevated LCS/LCSD recoveries. As the percent recovery in the LCSD and the relative percent difference for the LCS/LCSD pair were acceptable, data were not qualified for cis-nonachlor based on the elevated LCS recovery. The result for 4,4'-DDT in OC Pest-SRM 1944 was qualified as estimated and flagged 'J' based on the LCS/LCSD results.

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

General – MS/MSDs were not performed in association with these analyses. Precision and accuracy were accessed using the LCS/LCSD.

8. Calculation Checks – Acceptable

General – A calculation check was performed for sample results on one sample per calibration. The review confirmed the final results were correct as reported.

9. Reporting Limits and Chromatographic Review – Acceptable



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OVERALL ASSESSMENT OF DATA

The data reported in this laboratory group is considered usable for meeting project objectives. The completeness for laboratory group K1806131 is 100%.

Table 1
QA/QC Data Summary Review
Portland Harbor
Standard Reference Material
ALS Kelso Laboratory Group: K1806131

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
OC Pest - SRM 1944	K1806131-001	CWA1699M	4,4'-DDT	130	ug/kg	130 J	I

Notes:

J - estimated value

I - laboratory control sample recoveries

ug/kg - microgram per kilogram