

Data Validation Report

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

Laboratory: ALS Environmental, Kelso, WA

Laboratory Group: K1807964

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

Validation Level: Stage 4

AECOM Project

Number: 60566335 Task #2.12

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File Name: K1807964 DVR

SUMMARY

The data quality review of one rinsate blank collected on August 20, 2018, has been completed. The sample was 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, 1986, 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 sample was associated with laboratory group K1807964:

Sample ID	Laboratory ID
PDI-RB-PP-180820 (rinsate blank)	K1807964-001

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. 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 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

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2. Initial and Continuing Calibration Verifications – Acceptable

3. Blanks – Acceptable except as noted below:

General – One rinsate blank was reported with this laboratory group. bis(2-Ethylhexyl)phthalate (0.41 ug/L) was detected in the rinsate blank at a concentration between the method detection limit (MDL) and the reporting limit. No other samples were reported with this laboratory group.

4. Surrogates – Acceptable except as noted below:

bis(2-Ethylhexyl)phthalate and PCP by EPA 8270D – The percent recovery for the surrogate p-terphenyl-d14 (42%) was outside of the control limits of 48-109% in the parent sample used for batch QC analysis. Data were not qualified based on surrogates reported in samples reported as batch QC.

5. Internal Standards - Acceptable

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable

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

Tributyl Tin by Unger et al. – An MS/MSD was not performed using a sample reported in this laboratory group. Precision and accuracy were assessed using the LCS/LCSD results.

bis(2-Ethylhexyl)phthalate and PCP by EPA 8270D – An MS/MSD was performed using a sample from a project unrelated to the Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling project. Results were acceptable.

8. Calculation Checks – Acceptable

A calculation check was performed for all sample results. The review confirmed the final results were correct as reported.

9. Reporting Limits and Chromatographic Review – Acceptable except as noted below:

General – Chromatograms/spectra were reviewed to confirm target analytes were properly identified. The review confirmed target analytes were properly identified and reported by the laboratory.

bis(2-ethylhexyl)phthalate and PCP by EPA 8270D – Analyte concentrations detected between the MDL and the reporting limit are reported by the laboratory with a 'J' flag. The result for bis(2-ethylhexyl)phthalate in PDI-RB-PP-180820 was flagged 'J' by the laboratory. Laboratory 'J'-flagged results are considered estimated results. 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 K1807964 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 K1807964 based on this data validation.							