

Data Validation Report

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

Laboratory: Analytical Resources, Incorporated, Tukwila, WA

Laboratory Group: 18H0420

Analyses: Pentachlorophenol (PCP)

Validation Level: Stage 4

AECOM Project

Number: 60566335, Task #2.12

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Completed on: January 2, 2019

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File Name: 18H0420 DVR

SUMMARY

The data quality review of one surface water sample and one rinsate blank collected on August 20 and August 21, 2018, has been completed. Samples were analyzed for PCP by United States Environmental Protection Agency (EPA) Method 8041A by Analytical Resources, Incorporated (ARI) located in Tukwila, Washington. The analysis was performed in general accordance with the method specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)*. 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 18H0420:

Sample ID	Laboratory ID
PDI-WS-T05-1808	18H0420-01
PDI-RB-PP-1820 (rinsate blank)	18H0420-02

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 this sample set are included in Table 1.

SAMPLE RECEIPT

Upon receipt by ARI, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. 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 sample identification indicated on the sample container for PDI-RB-PP-1820 did not match the identification indicated on the COC. ARI logged the sample using the identification indicated on the COC. Samples were transferred to ARI by TestAmerica, Incorporated at the request of AECOM.



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ORGANIC ANALYSIS

Samples were analyzed for PCP by EPA Method 8041A.

1. Holding Times – Acceptable except as noted below:

The samples were extracted two (PDI-WS-T05-1808) and three (PDI-RB-PP-1820) days past the method-recommended holding time of seven days. The results for PCP in PDI-WS-T05-1808 and PDI-RB-PP-1820 were qualified as estimated and flagged 'UJ' based on holding time exceedance.

2. Initial and Continuing Calibration Verifications – Acceptable

3. Blanks – Acceptable

One rinsate blank was reported with this laboratory group. PCP was not detected in this rinsate blank.

4. Surrogate – Acceptable

5. Laboratory Control Sample (LCS) – Acceptable

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

An MS/MSD was not performed using a sample reported in this laboratory group. Accuracy was assessed using the LCS. Precision was not assessed.

7. Calculation Checks – Acceptable

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

8. Reporting Limits and Chromatographic Review – Acceptable

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

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 18H0420 is 100%.

Table 1
QA/QC Data Summary Review
Portland Harbor
Surface Water - August 2018
Analytical Resources, Incorporated Laboratory Group: 18H0420

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
PDI-WS-T05-1808	18H0420-01	SW8041A	Pentachlorophenol	0.025 U	ug/L	0.025 UJ	h
PDI-RB-PP-1820	18H0420-02	SW8041A	Pentachlorophenol	0.025 U	ug/L	0.025 UJ	h

Notes:

h - holding time

J - estimated value

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

ug/L - microgram per liter