

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: 18H0421

Analyses: Pentachlorophenol (PCP)

Validation Level: Stage 2A

AECOM Project

Number: 60566335, Task #2.12

Prepared by: Jennifer B. Garner/AECOM

Completed on: January 2, 2019

Reviewed by: Amy Dahl/AECOM

File Name: 18H0421 DVR

SUMMARY

The data quality review of four surface water samples collected on August 22 and August 23, 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 18H0421:

Sample ID	Laboratory ID
PDI-WS-T03-1808	18H0421-01
PDI-WS-T04-1808	18H0421-02
PDI-WS-T04-1808-D (Duplicate of PDI-WS-T04-1808)	18H0421-03
PDI-WS-T07-1808	18H0421-04

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. No discrepancies related to sample identification were noted by ARI, 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. Samples were transferred to ARI by TestAmerica, Incorporated at the request of AECOM and received on August 30, 2018.



**Data Validation Report
Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
Surface Water – August 2018
ARI Lab Group: 18H0421**

ORGANIC ANALYSIS

Samples were analyzed for PCP by EPA Method 8041A.

1. Holding Times – Acceptable except as noted below:

Sample PDI-WS-T03-1808 was extracted one day past the method-recommended holding time of seven days. The result for PCP in PDI-WS-T03-1808 was qualified as estimated and flagged 'UJ' based on holding time exceedance.

2. Blanks – Acceptable

One rinsate blank was reported with laboratory group 18H0420 (discussed under separate cover) and is applicable to the samples reported with this laboratory group. PCP was not detected in this rinsate blank.

3. Surrogate – Acceptable

4. Laboratory Control Sample (LCS) – Acceptable

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

An MS/MSD was performed using PDI-WS-T07-1808. The percent recovery for PCP in the MSD (177%) exceeded the control limits of 36-159%. As the percent recovery in the MS and the relative percent difference (RPD) for the MS/MSD pair were acceptable, data were not qualified based on the elevated percent recovery in the MSD.

6. Field Duplicate – Acceptable

A field duplicate was submitted for PDI-WS-T04-1808 and identified as PDI-WS-T04-1808-D. Results were comparable.

7. Reporting Limits – Acceptable

ARI assigned 'P1' flags to the MS and MSD results for PCP to indicate that the RPDs between the primary and confirmation analytical columns were more than 40%. No data qualifiers were assigned based on the dual-column RPDs for the MS and MSD.

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 18H0421 is 100%.

Table 1
QA/QC Data Summary Review
Portland Harbor
Surface Water - August 2018
Analytical Resources, Incorporated Laboratory Group: 18H0421

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
PDI-WS-T03-1808	18H0421-01	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