

Data Validation Report

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

Laboratory: Analytical Resources, Incorporated, Tukwila, WA

Laboratory Group: 18K0437

Analyses: Pentachlorophenol (PCP)

Validation Level: Stage 2A

AECOM Project

Number: 60566335, Task #2.12

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Completed on: January 4, 2019

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File Name: 18K0437 DVR

SUMMARY

The data quality review of five surface water samples and one rinsate blank collected between November 27 and November 29, 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 18K0437:

Sample ID	Laboratory ID
PDI-WS-T05-1811	18K0437-01
PDI-WS-T03-1811	18K0437-02
PDI-WS-T07-1811	18K0437-03
PDI-WS-T01-1811	18K0437-04
PDI-WS-T01-1811-D (duplicate of PDI-WS-T01-1811)	18K0437-05
PDI-RB-PP-181129 (rinsate blank)	18K0437-06

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.



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ORGANIC ANALYSIS

Samples were analyzed for PCP by EPA Method 8041A.

1. Holding Times – Acceptable
2. Blanks – Acceptable

One rinsate blank was reported with this laboratory group and is applicable to the surface water samples collected in November/December 2018. 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)

An MS/MSD was performed using PDI-WS-T03-1811. Results were acceptable.

6. Field Duplicate – Acceptable

A field duplicate was collected for PDI-WS-T01-1811 and identified as PDI-WS-T01-1811-D. Results were comparable.

7. Reporting Limits – Acceptable

Analyte concentrations detected between the method detection limit (MDL) and the reporting limit are reported by the laboratory with a 'J' flag. The result for PCP in PDI-WS-T05-1811 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.

The MDL and reporting limit for PCP were slightly elevated in PDI-WS-T01-1811-D due to limited sample volume. The MDL and reporting limit for PCP in this sample are below the cleanup level.

OVERALL ASSESSMENT OF DATA

The data reported in this laboratory group is considered usable for meeting project objectives. The completeness for laboratory group 18K0437 is 100%.

Table 1
QA/QC Data Summary Review
Portland Harbor
Surface Water - November 2018
Analytical Resources, Incorporated Laboratory Group: 18K0437

Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
No data qualifiers were assigned to results reported in 18K0437 based on this data validation.							