

# Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling  
 Portland Harbor Superfund Site  
 Surface Sediment – Stratified Random

Laboratory: ALS Environmental, Kelso, WA

Laboratory Group: K1803616-OXY

Analysis/Method: Oxychlordan

Validation Level: Stage 2A

AECOM Project

Number: 60566335 Task #2.12

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File Name: K1803616-OXY DVR

## SUMMARY

The data quality review of 19 surface sediment samples and two rinsate blanks collected on April 16 and April 17, 2018, has been completed. Samples were analyzed for oxychlordan by EPA Method 1699-modified (GC/MS/MS) at ALS Environmental (ALS) located in Kelso, Washington. The analysis was performed in general accordance with the method specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846), 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). Results for other chlorinated pesticides were provided previously and reviewed separately. The following samples are associated with laboratory group K1803616-OXY:

| Sample ID  | Laboratory ID |
|--|---------------|
| PDI-SG-B133-BL1                                  | K1803616-001  |
| PDI-SG-B135-BL1                                  | K1803616-002  |
| PDI-SG-B112-BL1                                  | K1803616-003  |
| PDI-SG-B115-BL1                                  | K1803616-004  |
| PDI-SG-B156-BL1                                  | K1803616-005  |
| PDI-SG-B159-BL1                                  | K1803616-006  |
| PDI-SG-B163-BL1                                  | K1803616-007  |
| PDI-SG-B164-BL1                                  | K1803616-008  |
| PDI-SG-B164-BL1-D (Duplicate of PDI-SG-B164-BL1) | K1803616-009  |
| PDI-SG-B167-BL1                                  | K1803616-010  |
| PDI-SG-B169-BL1                                  | K1803616-011  |
| PDI-SG-B114-BL1                                  | K1803616-012  |
| PDI-SG-B171-BL1                                  | K1803616-013  |
| PDI-SG-B173-BL1                                  | K1803616-014  |
| PDI-SG-B175-BL1                                  | K1803616-015  |
| PDI-SG-B108-BL1                                  | K1803616-016  |
| PDI-SG-B160-BL1                                  | K1803616-017  |
| PDI-SG-B168-BL1                                  | K1803616-018  |
| PDI-SG-B202-BL1                                  | K1803616-019  |



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| Sample ID                               | Laboratory ID |
|---|---------------|
| PDI-RB-VVSS-180416-1735 (Rinsate Blank) | K1803616-020  |
| PDI-RB-VVSS-180416-1800 (Rinsate Blank) | K1803616-021  |

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 ALS, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperatures were recorded. No discrepancies related to sample identification were noted by ALS and the coolers were received within the EPA-recommended temperature limits of greater than 0°C and less than or equal to 6°C.

**ORGANIC ANALYSIS**

Samples were analyzed for oxychlordan by EPA Method 1699-modified.

1. Holding Times – Acceptable except as noted below:

PDI-SG-B112-BL1 was extracted 43 days past the method-recommended holding time of 14 days for unfrozen samples and was not frozen to extend the holding time. The result for oxychlordan was qualified as estimated and flagged 'UJ' based on the holding time exceedance.

2. Initial and Continuing Calibration Verifications – Acceptable
3. Blanks – Acceptable

Two rinsate blanks (PDI-RB-VVSS-180416-1735 and PDI-RB-VVSS-180416-1800) were reported with this laboratory group. Oxychlordan was not detected in these rinsate blanks. Additional rinsate blanks may be associated with these samples and reported under separate cover. Target compounds may have been detected in the rinsate blanks associated with these samples. Sediment data were not qualified based on rinsate blank detections.

4. Surrogates – Acceptable
5. Internal Standards – Acceptable
6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) – Acceptable
7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Acceptable

MS/MSDs were not performed in association with the rinsate blank samples. Precision and accuracy were assessed using the LCS/LCSD results.

An MS/MSD was performed using PDI-SG-B202-BL1. Results were acceptable.



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An MS/MSD was performed using PDI-SG-S214 (laboratory group K1805148). Data in this laboratory group were not qualified based on these MS/MSD results.

8. Field Duplicate – Acceptable

A field duplicate was submitted for PDI-SG-B164-BL1 and identified as PDI-SG-B164-BL1-D. Results were comparable.

9. Reporting Limits – Acceptable except as noted below:

The reporting limits for oxychlordanes reported as not detected in the sediment samples were elevated due to moisture content and/or dilutions due to matrix interference. With the exceptions of PDI-SG-B135-BL1, PDI-SG-B112-BL1, PDI-SG-B115-BL1, PDI-SG-B159-BL1, PDI-SG-B163-BL1, PDI-SG-B164-BL1, PDI-SG-B164-BL1-D, PDI-SG-B167-BL1, PDI-SG-B114-BL1, PDI-SG-B175-BL1, PDI-SG-B108-BL1, and PDI-SG-B160-BL1, the reporting limits do not exceed the chlordanes cleanup level indicated in the QAPP.

## 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 K1803616-OXY is 100%.

**Table 1**  
**QA/QC Data Summary Review**  
**Portland Harbor**  
**Surface Sediment - Stratified Random**  
**ALS Kelso Laboratory Group: K1803616-OXY**

| <b>Sample ID</b> | <b>Laboratory ID</b> | <b>Method</b> | <b>Analyte</b> | <b>Laboratory Result</b> | <b>Units</b> | <b>Final Result</b> | <b>Reason Code</b> |
|------------------|----------------------|---------------|----------------|--------------------------|--------------|---------------------|--------------------|
| PDI-SG-B112-BL1  | K1803616-003         | CWA1699M      | Oxychlordan    | 4.9 U                    | ug/kg        | 4.9 UJ              | h                  |

**Notes:**

h - holding time

J - estimated value

ug/kg - microgram per kilogram

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