**High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry**
PCCDs/PCDFs (EPA Method 1613B), PCB Congeners (EPA Method 1668C), and Organochlorine Pesticides (EPA Method 1699)
EPA Stage 4 Review

| | |
|---|---|
| Site: PHSS-Swan Island Basin | SDG #: B6618 |
| Laboratory: SGS Wilmington (NC) | Project #: DT2002.03.03.03.01 |
| HydroGeoLogic, Inc. Validator: Ken Rapuano | Validation Date: 03.27.23 |
| HGL QC Reviewer: Jennifer Chandler | Peer Review Date: 04/10/2023 |

| Client Sample ID | Laboratory Sample ID | Matrix |
|---|---|---|
| SIB-SE-AAM131-FRONT-050522 | B6618_001 | Pre-filter & sediment |
| SIB-SE-AAQ005-FRONT-050522 | B6618_002 | Pre-filter & sediment |
| SIB-SE-AAM169-FRONT-050522 | B6618_003 | Pre-filter & sediment |
| SIB-SE-AAM107-FRONT-050522 | B6618_004 | Pre-filter & sediment |
| SIB-SE-AAP957-FRONT-050522 | B6618_005 | Pre-filter & sediment |
| SIB-SW-AAM131-BACK-050522 | B6618_006 | PUF Cartridge |
| SIB-SW-AAQ005-BACK-050522 | B6618_007 | PUF Cartridge |
| SIB-SW-AAM169-BACK-050522 | B6618_008 | PUF Cartridge |
| SIB-SW-AAM107-BACK-050522 | B6618_009 | PUF Cartridge |
| SIB-SW-AAP957-BACK-050522 | B6618_010 | PUF Cartridge |

SGS Wilmington (SGS) performed analyses of polyurethane foam (PUF) sorbent cartridges and associated sediment and pre-filters collected from stormwater on May 5, 2022 and analyzed these sample for polychlorinated dibenzo-p-dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) by EPA Method 1613B; polychlorinated biphenyl (PCB) congeners by EPA Method 1668C; and organochlorine pesticides by EPA Method 1699. Analyses were performed in accordance with the project Quality Assurance Project Plan (HGL, 2022).

The data were validated in accordance with the following documents:

- Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP), Revision 3; Remedial Design Services, Swan Island Basin Project Area, CERCLA Docket No. 10-2021-001, Portland Harbor Superfund Site Portland, Multnomah County, Oregon (HGL, 2022)
- USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (NFG) (EPA, 2020)
- HGL SOP HGL SOP 412.501 – Data Validation, U.S. EPA Stage 2A and Stage 2B (HGL, 2021)

In some cases, the calibration criteria presented in the QAPP did not correspond to the criteria presented in the laboratory analytical SOPs. In these cases, the laboratory criteria were used to evaluate calibration performance.

The qualifiers defined in Table 1 of EPA, 2020 have been applied to any results requiring qualification as described in this data validation report; the historical site data set uses only the J qualifier for estimated results (ie, does not include the directional J+ and J− qualifiers) and this convention was retained in this DV report. The qualifiers have also been applied as the final qualifier to the electronic data deliverable (EDD) file provided by the laboratory. Any non-standard qualifiers and informational flags reported by the laboratory in the laboratory qualifier field of this EDD are not included in the final qualifier field. A qualification summary table is provided at the end of this report as Attachment A.

In the text of the data validation report, assigned qualifiers are presented in the format “[qualifier]-[reason code(s)]” for ease of description. When presented in tabular format, the qualifier and the reason codes are presented in the columns named as presented in the EDD. The HGL data validation SOP does not include

a reason code for ion abundance ratio discrepancies in labeled standards; the reason code IAR is used as the reason code in such cases.

Sample Delivery and Condition – The soil samples arrived at the laboratory in acceptable condition and temperature. All samples were collected on May 5, 2022. The samples were shipped on May 9, 2022 and arrived at the laboratory on May 10, 2022. Per the field team leader, the samples were stored on-site in a refrigerator before shipping. The site refrigerators are equipped with thermometers, but readings are not taken.

*Qualification*: None required.

Holding Times – The sediments and PUF media were extracted 20 days after extractions. The project QAPP indicates a holding time of 14 days to extract PUF cartridges and sediment collected on filters. This requirement is inconsistent with the laboratory's extraction SOP (SGS SOP 441.6), which indicates a 1-year extraction requirement for all three HRGC/HRMS methods reported in this SDG. In the judgment of the HGL reviewer, the longer holding time is more appropriate for these parameters and there is no impact on the reported results.

*Qualification*: None required.

Field Blanks – No field blanks were submitted in association with the samples in this SDG.

*Qualification*: None required.

Field Duplicates – No field duplicates were submitted in association with the samples in this SDG.

*Qualification*: None required.

***1. Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans***

Mass Tuning – Mass tuning was performed before the ICal sequence, before each daily analytical sequence, and at the end of each daily analytical sequence. Data was not provided to calculate the resolving power; however, all peaks appeared to be fully resolved and gaussian in form.

*Qualification*: None required.

Initial Calibration – A six-point ICal was performed on instrument HRMS3 on November 10, 2021, and is associated with all PCDD/PCDF congener results reported in this SDG. All target analytes and labeled standards included in the ICal had %RSDs ≤20% and ≤35%, respectively. All ion abundance ratio (IAR) criteria were met in the ICal standards.

The ICal was checked by back-calculating the concentration for all PCDD/PCDF congener and labeled standards for each calibration level. No acceptance criteria for this back-check were provided in the analytical method or in the laboratory SOP. All back-calculated concentrations agreed with the nominal standard concentration within ±25% in the low standard (CS0) and within ±20% all other standards (CS1 through CS5) and in the judgment of the validator, these results are acceptable.

An ICal verification standard was not included in this laboratory report. The laboratory was contacted and provided this information in a separate file. All ICV results were in control.

*Qualification*: None required.

Continuing Calibration – All CCV results for target compounds and labeled standards met the acceptance windows in the method. All IARs were acceptable. The laboratory reports more ESs than are included in the method; the ES %Ds for non-method ESs were within 30% of the ICal RRFs and in the judgment of the

HGL reviewer no qualification is required. The additional ESs are C13 labeled analogs of 123789-HxCDD and OCDF.

*Qualification*: None required.

Labeled Standards – All labeled standard %Rs met the method control limits.

*Qualification*: None required.

Method Blanks – The method blank associated with sample analyses was free from contamination.

*Qualification*: None required.

Laboratory Control Samples – The LCS (identified as an OPR standard) associated with all PCB sample analyses had results (reported as mass recovery) in control.

*Qualification*: None required.

MS/MSD – No MS/MSD results were reported in this SDG.

*Qualification*: None required.

Raw Data Review – SIB-SE-AAP957-FRONT-050522 was selected for an in-depth review. Gas chromatograms, retention time windows, and S/N were examined. No discrepancies were noted.

*Qualification*: None required.

Compound Quantitation and Identification – The laboratory uses a labeled analog for each target PCDD/PCDF. Detected results that met all identification criteria except ion abundance ratio were reported as detections by the laboratory with a laboratory qualifier of EMPC and with the quantitated result enclosed in brackets. These results should be qualified J-EMPC unless the J qualifier is superseded by a more severe qualifier. The laboratory reports non-detected results as the EDL enclosed by parentheses on the summary forms; this reporting convention is considered to be the equivalent to reporting results as "EDL U." Detected results below the PQL are reported by the laboratory with a J qualifier. These J qualifiers are retained unless superseded by a more severe qualifier.

***Qualification*: All results reported with a laboratory qualifier of EMPC are qualified J-EMPC unless superseded by a more severe qualifier. All results reported as detections below the LOQ retain the J qualifier assigned by the laboratory unless superseded by a more severe qualifier.**

Calculation and Transcription Verification – Sample SIB-SE-AAP957-FRONT-050522 was selected for calculation and transcription verification. Recalculation was performed on 10% of detected results, selecting at least one target PCDD/PCDF per homolog group (if available), and on 10% of the ESs, selecting at least one per injected standard. These calculation verifications used the raw data and were carried through to the results reported on summary pages and also constitute a transcription verification. Calculations are presented in Attachment B.1.

*Qualification*: None required.

Overall Assessment of Data - The data are usable as reported with the qualification applied by the reviewer.

***2. Polychlorinated Biphenyl Congeners***


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Mass Tuning – Mass tuning was performed before the ICal sequence, before each daily analytical sequence, and at the end of each daily analytical sequence. Data was not provided to calculate the resolving power; however, all peaks appeared to be fully resolved and gaussian in form.

*Qualification*: None required.

Initial Calibration – A six-point ICal was performed on instrument MM4 on May 27, 2022, and is associated with all PCB congener results reported in this SDG. The ICal included all target analytes required by the method (the 12 WHO "Toxic" congeners and the beginning and ending homolog descriptors). All target analytes and labeled standards included in the ICal had %RSDs ≤20%. The ICal verification standard met all acceptance criteria for target analytes and labeled standards.

The ICal was checked by back-calculating the concentration for the short list of PCBs and labeled standards for each calibration level. No acceptance criteria for this back-check were provided in the analytical method or in the laboratory SOP. All back-calculated concentrations agreed with the nominal standard concentration within ±25% in the low standard (CS0) and within ±20% all other standards (CS1 through CS5) and in the judgment of the validator, these results are acceptable.

All ion abundance ratio (IAR) criteria were met in the ICal standards with the exception of the IAR for PCB-1 in the high-level standard (CS5). The IAR of 2.62 was only slightly below the lower end of the calculated window, which is 2.65. The laboratory noted in the raw data that this was due to detector saturation and that all detected results >CS4 concentration (400 pg/µL on column) should be reported with qualification. All PCB-1 results were quantified from instrument responses <CS4 response and no qualification is required.

*Qualification*: None required.

Continuing Calibration – The laboratory analyzed two types of CCV in each analytical sequence: one containing the short list of PCBs calibrated to a 6-point curve and a single concentration CCV used to quantify all other PCBs. Target PCBs and labeled analogs met the %D requirement in each CCV. Ion ratios were in control.

*Qualification*: None required.

Method Blanks – The method blank associated with sample analyses was contaminated with the following PCBs.

| PCB | Blank Result (pg) | Action Level (pg) |
|---|---|---|
| 1 | 30.7 | 153.5 |
| 2 | 27 | 135 |
| 3 | 29.2 | 146 |
| 4 | 32.4 | 162 |
| 9 | 6.53 | 32.65 |
| 7 | 11.1 | 55.5 |
| 6 | 19 | 95 |
| 8 | 55.6 | 278 |
| 11 | 1620 | 8100 |
| 13/12 | 13.3 | 66.5 |
| 15 | 24.7 | 123.5 |
| 19 | 9.94 | 49.7 |
| 30/18 | 63.7 | 318.5 |
| 17 | 40.2 | 201 |
| 27 | 6.16 | 30.8 |
| 16 | 30.6 | 153 |
| 32 | 21.1 | 105.5 |

| PCB | Blank Result (pg) | Action Level (pg) |
|---|---|---|
| 26/29 | 15.6 | 78 |
| 25 | 5.82 | 29.1 |
| 31 | 52.3 | 261.5 |
| 28/20 | 60.6 | 303 |
| 21/33 | 34.1 | 170.5 |
| 22 | 19.2 | 86 |
| 35 | 6.33 | 31.65 |
| 37 | 11.9 | 59.5 |
| 50/53 | 9.99 | 49.95 |
| 45 | 6.34 | 31.7 |
| 51 | 21.5 | 107.5 |
| 52 | 99.5 | 497.5 |
| 69/49 | 40.6 | 203 |
| 48 | 10.6 | 53 |
| 44/47/65 | 99.2 | 496 |
| 59/62/75 | 4.05 | 20.25 |
| 42 | 13.2 | 66 |
| 71/40 | 20.4 | 102 |
| 64 | 20.3 | 101.5 |
| 61/70/74/76 | 66.8 | 334 |
| 66 | 25.9 | 129.5 |
| 56 | 7.54 | 37.7 |
| 95 | 102 | 510 |
| 91 | 12.8 | 64 |
| 84 | 31.1 | 155.5 |
| 92 | 20 | 100 |
| 113/90/101 | 93.8 | 469 |
| 99 | 36.2 | 181 |
| 109/119/86/97/125/87 | 46.9 | 234.5 |
| 116/85 | 9 | 45 |
| 110 | 77.6 | 388 |
| 82 | 6.74 | 33.7 |
| 107 | 2.6 | 13 |
| 118 | 47.8 | 239 |
| 105 | 14.6 | 73 |
| 136 | 17.5 | 87.5 |
| 151/135 | 24.8 | 124 |
| 144 | 3.71 | 18.55 |
| 147/149 | 57 | 285 |
| 132 | 18.2 | 91 |
| 146 | 6.28 | 31.4 |
| 153/168 | 40.7 | 203.5 |
| 141 | 10.1 | 50.5 |
| 137 | 3.47 | 17.35 |
| 164 | 1.71 | 8.55 |
| 163/138/129 | 42.5 | 212.5 |
| 158 | 3.17 | 15.85 |
| 128/166 | 4.95 | 24.75 |
| 179 | 7.03 | 35.15 |
| 176 | 2.04 | 10.2 |
| 187 | 10.4 | 52 |
| 183 | 5.78 | 28.9 |

| PCB | Blank Result (pg) | Action Level (pg) |
|---|---|---|
| 174 | 9.24 | 46.2 |
| 177 | 5.46 | 27.3 |
| 180/193 | 14.1 | 70.5 |
| 170 | 2.85 | 14.25 |
| 209 | 23.1 | 115.5 |

The laboratory applied a B flag to all results that were less than 10x the concentration in the associated blank. All detected results below the action level (calculated at 5x the blank concentration) should be qualified U.

***Qualification*: The following sample results are qualified U:**

- **SIB-SE-AAM131-FRONT-050522: PCBs 1, 2, 3, and 7**
- **SIB-SE-AAQ005-FRONT-050522: PCBs 1, 2, 3, 4, and 7**
- **SIB-SE-AAM169-FRONT-050522: PCBs 1, 2, 3, 4, 9, 7, 11, and 13/12**
- **SIB-SE-AAM107-FRONT-050522: PCBs 1, 2, 3, 9, 7, 6, 11, and 13/12**
- **SIB-SE-AAP957-FRONT-050522: PCBs 1, 2, 3, 4, 9, 7, 6, 8, 11, 13/12, 19, 30/18, 17, 27, and 51**
- **SIB-SW-AAM131-BACK-050522: PCBs 1, 2, 3, and 7**
- **SIB-SW-AAQ005-BACK-050522: PCBs 1, 2, 3, 7, 11, 13/12, 137, and 209**
- **SIB-SW-AAM169-BACK-050522: None**
- **SIB-SW-AAM107-BACK-050522: PCBs 11 and 137**
- **SIB-SW-AAP957-BACK-050522: PCBs 1, 2, and 3**

Labeled Standards – All labeled standard %Rs met the method control limits with the following exceptions: the analysis of sample SIB-SE-AAM131-FRONT-050522 had high %Rs for PCB-104L and PCB-155L and the analysis of sample SIB-SE-AAQ005-FRONT-050522 had a high %R for PCB-155L.

- PCB-104L is used to quantitate PCB-104 and PCB-96. The PCB-96 result for sample SIB-SE-AAM131-FRONT-050522 should be qualified J-LSH; the PCB-104 result for sample SIB-SE-AAM131-FRONT-050522 is a non-detection and does not require qualification.
- PCB-155L is used to quantitate PCBs 155, 152, 150, 136, and 145. The PCB-136 results for samples SIB-SE-AAM131-FRONT-050522 and SIB-SE-AAQ005-FRONT-050522 should be qualified J-LSH; the non-detected associated PCB results for these two samples are non-detections and do not require qualification.

All IARs were in control for labeled standards except for PCB-169L in sample SIB-SE-AAQ005-FRONT-050522, PCB-153L in sample SIB-SE-AAP957-FRONT-050522, and PCB-1L in sample SIB-SW-AAM107-BACK-050522.

- The non-detected PCB-169 result reported for sample SIB-SE-AAQ005-FRONT-050522 should be qualified UJ-IAR. No other CBs are quantitated using this ES.
- PCB-153L is used to calibrate 23 HxCBs. The detected results for PCBs 151/135, 154, 144, 147/149, 134, 143, 139/140, 131, 132, 133, 146, 153/168, 141, 130, 137, 164, 163/138/129, and 158 reported for sample SIB-SE-AAP957-FRONT-050522 should be qualified J-IAR. The non-detected results for PCBs 148, 142, 165, 161, and 160 reported for sample SIB-SE-AAP957-FRONT-050522 should be qualified UJ-IAR.
- The NFG indicates that non-detected results should be rejected if an IAR is out of control in a sample and also in one or more associated calibration standards. The IAR for PCB-1L was also out of control in the high calibration standard (see Initial Calibration above); this was due to a noted detector saturation. In the judgment of the HGL reviewer, the non-detected PCB-1 result reported for sample SIB-SW-AAM107-BACK-050522 should be qualified UJ-IAR instead of being rejected.

***Qualification*:**

- **The PCB-96 and PCB-136 results for sample SIB-SE-AAM131-FRONT-050522 are qualified J-LSH.**
- **The PCB-136 result for sample SIB-SE-AAQ005-FRONT-050522 is qualified J-LSH.**

- **The PCB-169 result for sample SIB-SE-AAQ005-FRONT-050522 is qualified UJ-IAR.**
- **The PCB 151/135, 154, 144, 147/149, 134, 143, 139/140, 131, 132, 133, 146, 153/168, 141, 130, 137, 164, 163/138/129, and 158 results for sample SIB-SE-AAP957-FRONT-050522 are qualified J-IAR.**
- **The PCB 148, 142, 165, 161, and 160 results for sample SIB-SE-AAP957-FRONT-050522 is qualified UJ-IAR.**
- **The PCB-1 result for sample SIB-SW-AAM107-BACK-050522 is qualified UJ-IAR.**

Laboratory Control Samples – The LCS (identified as an OPR standard) associated with all PCB sample analyses had %Rs in control.

*Qualification*: None required.

MS/MSD – No MS/MSD results were reported in this SDG.

*Qualification*: None required.

Raw Data Review – SIB-SW-AAM169-BACK-050522 was selected for an in-depth review. Gas chromatograms, retention time windows, and S/N were examined. It was noted that the laboratory was using a different IAR window for PeCBs than is presented in Table 8 of the method. The laboratory SOP indicates that PeCBs are identified using the (M)/(M+2) ions instead of the (M+2)/(M+4) ions.

*Qualification*: None required.

Compound Quantitation and Identification – The laboratory uses a single ES associated with target CBs instead of using the mean CB procedure described in Method 1688C. The laboratory provided a table of these associations. Detected results that met all identification criteria except ion abundance ratio were reported as detections by the laboratory with a laboratory qualifier of EMPC and with the quantitated result enclosed in brackets. These results should be qualified J-EMPC unless the J qualifier is superseded by a more severe qualifier. The laboratory reports non-detected results as the EDL enclosed by parentheses on the summary forms; this reporting convention is considered to be the equivalent to reporting results as "EDL U." Detected results below the PQL are reported by the laboratory with a J qualifier. These J qualifiers are retained unless superseded by a more severe qualifier.

***Qualification*: All results reported with a laboratory qualifier of EMPC are qualified J-EMPC unless superseded by a more severe qualifier. All results reported as detections below the LOQ retain the J qualifier assigned by the laboratory unless superseded by a more severe qualifier.**

Calculation and Transcription Verification – Sample SIB-SW-AAM169-BACK-050522 was selected for calculation and transcription verification. Recalculation was performed on 10% of detected results, selecting at least one target PCB per ES (if available), and on 10% of the ESs, selecting at least one per injected standard. These calculation verifications used the raw data and were carried through to the results reported on summary pages and also constitute a transcription verification. Calculations are presented in Attachment B.2.

*Qualification*: None required.

Overall Assessment of Data - The data are usable as reported with the qualification applied by the reviewer.

***3. Organochlorine Pesticides***

Mass Tuning – Mass tuning was performed before the ICal sequence, before each daily analytical sequence, and at the end of each daily analytical sequence. Data was not provided to calculate the resolving power; however, all peaks appeared to be fully resolved and gaussian in form.

*Qualification*: None required.

Initial Calibration – A six-point ICal was performed on instrument HRMS3 on November 10, 2021, and is associated with all PCDD/PCDF congener results reported in this SDG. All target analytes and labeled standards included in the ICal had %RSDs ≤20% and ≤50%, respectively. All ion abundance ratio (IAR) criteria were met in the ICal standards.

The ICal was checked by back-calculating the concentration for all PCDD/PCDF congener and labeled standards for each calibration level. No acceptance criteria for this back-check were provided in the analytical method or in the laboratory SOP. All back-calculated concentrations agreed with the nominal standard concentration within ±25% in the low standard (CS0) and within ±20% all other standards (CS1 through CS5), with some minor exceptions in the CS4 and CS5 levels. In the judgment of the validator, the results are acceptable for demonstrating the validity of the calibration curve over the calibrated range.

*Qualification*: None required.

DDT Breakdown Check – A DDT breakdown check was performed before the ICal sequence and before the analysis of the CCV in the sample analysis sequence. The DDT breakdown checks passed the acceptance criteria.

*Qualification*: None required.

Continuing Calibration – All CCV results for target compounds and labeled standards met the acceptance windows in the laboratory SOP. All IARs were acceptable.

*Qualification*: None required.

Labeled Standards – The labeled analog of dieldrin had a %R below the acceptance limits for samples SIB-SE-AAM169-FRONT-050522, SIB-SW-AAM131-BACK-050522, SIB-SW-AAQ005-BACK-050522, and SIB-SW-AAM107-BACK-050522. The detected dieldrin results reported for samples SIB-SW-AAQ005-BACK-050522 and SIB-SW-AAM107-BACK-050522 should be qualified J-LSL. The discrepancies for samples SIB-SE-AAM169-FRONT-050522 and SIB-SW-AAM131-BACK-050522 were within 10 percentage points of the lower limit of 36% and in the judgment of the HGL validator, rejection of the associated non-detected dieldrin results is not warranted. The dieldrin results reported for samples SIB-SE-AAM169-FRONT-050522 and SIB-SW-AAM131-BACK-050522 should be qualified UJ-LSL. All other labeled standard %Rs met the method control limits.

All IARs were in control for labeled standards except for the following:

- C13-4,4′-DDE in sample SIB-SE-AAM131-FRONT-050522; the detected 4,4′-DDE result should be qualified J-IAR.
- C13-4,4′-DDE and C13-dieldrin in sample SIB-SE-AAM169-FRONT-050522; the detected 4,4′-DDE result should be qualified J-IAR and the non-detected dieldrin result should be qualified UJ-IAR.
- C13-4,4′-DDT in sample SIB-SW-AAQ005-BACK-050522; the non-detected 4,4′-DDT result should be qualified UJ-IAR.
- C13-4,4′-DDE in sample SIB-SW-AAM169-BACK-050522; the detected 4,4′-DDE result should be qualified J-IAR.

Cleanup standard PCB-97 was spiked into each sample, but the recoveries were <5% in all samples. According to the laboratory, pesticide samples that show any matrix interferences are subjected to GPC before loading on instrument. Because the method calls for a PCB labeled standard as the cleanup standard and PCBs are not typically recovered by GPC, there is no useful CS recovery information. In the judgment of the HGL validator, the CS reported for OC pesticides is not appropriate for the cleanup method and no qualification is required based on the CS recoveries.


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***Qualification*: The dieldrin results for samples SIB-SW-AAQ005-BACK-050522 and SIB-SW-AAM107-BACK-050522 are qualified J-LSL; the dieldrin results reported for samples SIB-SE-AAM169-FRONT-050522 and SIB-SW-AAM131-BACK-050522 are qualified UJ-LSL.**

**The detected 4,4′-DDE results for samples SIB-SE-AAM131-FRONT-050522, SIB-SE-AAM169-FRONT-050522, SIB-SW-AAM169-BACK-050522 are qualified J-IAR. The non-detected dieldrin result for sample SIB-SE-AAM169-FRONT-050522 and the non-detected 4,4′-DDT result for sample SIB-SW-AAQ005-BACK-050522 are qualified UJ-IAR.**

Method Blanks – The method blank associated with sample analyses was free from contamination.

*Qualification*: None required.

Laboratory Control Samples – The LCS (identified as an OPR standard) associated with all PCB sample analyses had results in control except for 2,4′-DDD, which had a %R of 122% slightly above the upper control limit of 120%. The detected 2,4′-DDD results reported for samples SIB-SE-AAM131-FRONT-050522 and SIB-SE-AAM107-FRONT-050522 should be qualified J-LCSH. There is no effect on non-detected results.

***Qualification*: The 2,4′-DDD results for samples SIB-SE-AAM131-FRONT-050522 and SIB-SE-AAM107-FRONT-050522 are qualified J-LCSH.**

MS/MSD – No MS/MSD results were reported in this SDG.

*Qualification*: None required.

Raw Data Review – SIB-SW-AAP957-BACK-050522 was selected for an in-depth review. Gas chromatograms, retention time windows, and S/N were examined. No discrepancies were noted.

*Qualification*: None required.

Compound Quantitation and Identification – The laboratory uses a labeled analog for each target pesticide. Detected results that met all identification criteria except ion abundance ratio were reported as detections denoted as an EMPC by the laboratory. These results should be qualified J-EMPC unless the J qualifier is superseded by a more severe qualifier. The laboratory reports non-detected results as ND with the associated detection limit on the summary forms; this reporting convention is considered to be the equivalent to reporting results as “DL U.” Detected results below the PQL are reported by the laboratory with a J qualifier. These J qualifiers are retained unless superseded by a more severe qualifier.

***Qualification*: All results reported with a laboratory qualifier of EMPC are qualified J-EMPC unless superseded by a more severe qualifier. All results reported as detections below the LOQ retain the J qualifier assigned by the laboratory unless superseded by a more severe qualifier.**

Calculation and Transcription Verification – Sample SIB-SW-AAP957-BACK-050522 was selected for calculation and transcription verification. Recalculation was performed on the detected dieldrin result, which was the only pesticide detected, and on 10% of the ESs, selecting at least one per injected standard. These calculation verifications used the raw data and were carried through to the results reported on summary pages and also constitute a transcription verification. Calculations are presented in Attachment B.3.

*Qualification*: None required.

Overall Assessment of Data - The data are usable as reported with the qualification applied by the reviewer.


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