# HGL Data Validation Review Report

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| Project Name/Number | PHSS-SIB PDI / DT2002 |
| Data Validation Stage | 2A |
| Validation Subcontractor | EDS, Ltd. |
| Laboratory | ALS-Kelso and Burlington |
| SDG | K2204961 (Revision 01) |
| HGL Reviewer | Ken Rapuano |
| Review Date | 4.21.23 |
| QC Review | Deanna Valdebenito (5/31/23) |

**General issues:**

**TPH-DRO/RRO – NWTPH-Dx**

Due to an error on the chain of custody form, the laboratory reported results for TPH-DRO/RRO for aqueous samples. TPH-DRO and RRO are not contaminants of concern for surface water. **All results reported for NWTPH-Dx, including QC samples, should have the "reportable_result" field changed from Yes to No.**

Qualification Modification Table (all results in µg/L)

| Sample | Analyte | Validated Result | Validated Qualifier | Modified Validated Qualifier | Modified Interpreted Qualifier | Modified Final Reason Code |
|---|---|---|---|---|---|---|
| All NWTPH-Dx results, including QC | All reported results including TRG, SUR, and SC | varies | varies | Change "reportable_result" field from "Yes" to "No" | | |
| SIB-SW-AAM131-CAR-ST-050522 | PHC AS DIESEL FUEL and Residual Range Organics (C25-C36) | varies | varies | DNR | DNR | EXC |
| SIB-SW-AAQ005-CAR-ST-050522 | PHC AS DIESEL FUEL and Residual Range Organics (C25-C36) | varies | varies | DNR | DNR | EXC |
| SIB-SW-AAM169-CAR-ST-050522 | PHC AS DIESEL FUEL and Residual Range Organics (C25-C36) | varies | varies | DNR | DNR | EXC |
| SIB-SW-AAM107-CAR-ST-050522 | PHC AS DIESEL FUEL and Residual Range Organics (C25-C36) | varies | varies | DNR | DNR | EXC |

| Sample | Analyte | Validated Result | Validated Qualifier | Modified Validated Qualifier | Modified Interpreted Qualifier | Modified Final Reason Code |
|---|---|---|---|---|---|---|
| SIB-SW-AAP957-CAR-ST-050522 | PHC AS DIESEL FUEL and Residual Range Organics (C25-C36) | varies | varies | DNR | DNR | EXC |

**Herbicides – SW8151A**

No additional issues noted.

**Metals and Mercury – SW6020A and SW7471B**

SIB-SW-AAM131-CAR-SE-050522 could not be analyzed for mercury due to the limited amount of sediment recovered from this carboy after centrifuging.

The original laboratory hardcopy deliverable and EDD correctly includes sediment target analytes cadmium and lead in the centrifuged solids results; the reissued laboratory report and EDD omit cadmium and lead. The validators submitted the metals qualifications in the original EDD; however, it appears that the validation is based on the revised hardcopy report which does not include results for cadmium and lead. The reportable_result for cadmium and lead were indicated as “No” by the validators. **Cadmium and lead are sediment COCs and all results for these analytes, including laboratory QC, should have reportable_result changed from No to Yes.**

The lead contamination in the method blank was not evaluated. All lead results are >> the concentration detected in the method blank and no qualification is required.

Centrifuged sediment results included chromium in both sets of deliverables. **Chromium is not a sediment COC and all sediment results, including for laboratory QC, should have the reportable_result field changed from Yes to No. Although chromium is not a sediment CoC, the validator-applied J qualifiers and MBL reason codes should be removed.**

Qualification Modification Table (all results in µg/L)

| Sample | Analyte | Validated Result | Validated Qualifier | Modified Validated Qualifier | Modified Interpreted Qualifier | Modified Final Reason Code |
|---|---|---|---|---|---|---|
| All results including QC | Chromium (all sample and QC results including TRG and SC) | varies | varies | Change “reportable_result” field from “Yes” to “No” | | |
| All samples | Chromium | varies | varies | DNR | EXC | DNR |
| All results including QC | Cadmium and lead (all sample and QC results including TRG and SC) | varies | varies | Change “reportable_result” field from “No” to “Yes” | | |

**Tributyltin – ALS SOP**

No additional issues noted.

**General Chemistry – TSS, TOC, DOC**

No additional issues noted.

**Pesticides – Method 1699M**

No additional issues noted.

**SVOCs and PAHs – SW8270D, 8270D-SIM, and 8270D-ULL**

The DV report did not note that the method blank for 8270D contained 0.22 µg/L bis(2-ethylhexyl)phthalate. All B2EHP results are equal to or below the qualification threshold of 1.1 µg/L. All results are less than 0.5 µg/L with the exception of 1.1 µg/L for SIB-SW-WR186-050522. In the judgment of the HGL reviewer, the result for sample SIB-SW-WR186-050522 shows the potential presence of B2EHP in this sample. **The B2EHP result for sample SIB-SW-WR186-050522 should be qualified J, reason code MBL; the B2EHP results for all other samples should be qualified U, reason code MBL.**

Qualification Modification Table (all results in µg/L) – Method 8270D

| Sample | Analyte | Validated Result | Validated Qualifier | Modified Validated Qualifier | Modified Interpreted Qualifier | Modified Final Reason Code |
|---|---|---|---|---|---|---|
| SIB-SW-WR186-050522 | bis(2-Ethylhexyl)phthalate | 1.1 | J | J | J | MBL |
| All other samples | bis(2-Ethylhexyl)phthalate | varies | J | U | U | MBL |
| | | varies | varies | Change “Detect_flag” from Y to N | | |

The validator applied a U qualifier to the phenanthrene result for sample SIB-SW-WR15-050522 using the NFG blank qualification rules. This phenanthrene result is >5x the blank concentration and in the judgment of the HGL reviewer, does not require additional qualification.

Qualification Modification Table (all results in µg/L) – Method 8270D-SIM

| Sample | Analyte | Validated Result | Validated Qualifier | Modified Validated Qualifier | Modified Interpreted Qualifier | Modified Final Reason Code |
|---|---|---|---|---|---|---|
| SIB-SW-WR15-050522 | Phenanthrene | 0.017 | U | J | J | -- |