# HGL Data Validation Review Report

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| Project Name/Number | PHSS-SIB PDI / DT2002 |
| Data Validation Stage | 4 |
| Validation Subcontractor | EcoChem |
| Laboratory | Analytical Resources, Inc. (ARI) |
| SDG | 22E0328 |
| HGL Reviewer | Ken Rapuano 1.25.23 |
| HGL QC Review | Deanna Valdebenito 2.14.23 |

**General issues:** The laboratory reported the ICP-MS metals listed for aqueous samples in Tables 15.10b of the QAPP; however, the laboratory also reported cadmium and lead, which are not COCs for aqueous environmental samples. The chain of custody also requested analyses for mercury, which is also not a COC for aqueous environmental samples. The project manager provided guidance that these unnecessary results be excluded from the data set. The HGL project manager was consulted and confirmed that the results for metals without a corresponding aqueous cleanup value should not be reported. **Results for cadmium, lead, and mercury are qualified DNR with reason code EXC; the "reportable_result" field in the corresponding Excel file should be changed from Yes to No for all DNR results.**

The raw data provided for ICP-MS analyses had relevant information for project samples highlighted. Due to an error in processing the files into a .pdf for delivery, the highlighting became opaque, and the information became obscured. The laboratory provided a revised set of raw data that was usable for confirming summary results against the raw data.

**ICP-MS Metals and Mercury – 6020B and 7470A**

**Holding Time:** The analysis holding time for sample SIB-SW-WR71-050522 was listed as 29 days; however, it appears that this was calculated based on collection time. The sample was collected on 5.5.22 and analyzed on 6.2.22, which is day 28 when calculating using days. No qualification is required.

**Interference Check Sample A:** The DV Report did not indicate any issues with ICSA results; however, Cr-53 was reported at 12.488 µg/L, which is much greater than 2x the PQL of 0.5 µg/L. Based on the raw data results, Cr-53 was not used to quantify chromium for any sample and no qualification is required.

Qualification Modification Table (all results in µg/L)

| Sample | Analyte | Validated Result | Validated Qualifier | Validated Reason Code | Modified Final Qualifier | Modified Final Reason Code |
|---|---|---|---|---|---|---|
| All samples | Cadmium | varies | varies | varies | DNR | EXC |
| | Lead | varies | varies | varies | DNR | EXC |
| | Mercury | varies | U | varies | DNR | EXC |
| | Cadmium, lead, and mercury | Change "reportable_result" field from "Yes" to "No" | | | | |