Stage 2A Review
Data Quality Control (QC)

Site: PHSS-SIB PDI	SDG #: Case 23F0230
Laboratory: ARI	Date: 8/23/2023
HydroGeoLogic, Inc. Reviewer: Deanna Valdebenito Peer Reviewer: Ken Rapuano (8.28.23)	Project: DT2002

Client Sample ID	Laboratory Sample ID	Analyses	Matrix
SIB-104-TOB-1-2-10062022	23F0230-01	PCB Aroclors and Total Metals	Solid
SIB-102-TOB-1-2-10062022	23F0230-02	PCB Aroclors and Total Metals	Solid
SIB-102-TOB-2-3-10062022	23F0230-03	PCB Aroclors and Total Metals	Solid
SIB-102-MLW-1-2-10062022	23F0230-04	Total Metals	Solid
SIB-101-TOB-1-2-10062022	23F0230-05	PCB Aroclors and Total Metals	Solid
SIB-100-OHW-1-2-10062022	23F0230-06	PCB Aroclors	Solid
SIB-100-OHW-2-3-10062022	23F0230-07	PCB Aroclors	Solid
SIB-100-TOB-1-2-10062022	23F0230-08	PCB Aroclors	Solid
SIB-100-TOB-2-3-10062022	23F0230-09	PCB Aroclors	Solid
SIB-099-OHW-1-2-10072022	23F0230-10	PCB Aroclors	Solid
SIB-099-TOB-1-2-10072022	23F0230-11	PCB Aroclors	Solid
SIB-099-TOB-2-3-10072022	23F0230-12	PCB Aroclors	Solid
SIB-098-OHW-1-2-10072022	23F0230-13	PCB Aroclors	Solid
SIB-098-OHW-2-3-10072022	23F0230-14	PCB Aroclors	Solid
SIB-098-TOB-1-2-10072022	23F0230-15	PCB Aroclors and Total Metals	Solid
SIB-098-TOB-2-3-10072022	23F0230-16	PCB Aroclors and Total Metals	Solid
SIB-097-OHW-1-2-10072022	23F0230-17	PCB Aroclors and Total Metals	Solid
SIB-097-TOB-1-2-10072022	23F0230-18	PCB Aroclors and Total Metals	Solid
SIB-096-OHW-1-2-10072022	23F0230-19	PCB Aroclors and Total Metals	Solid

The following Stage 2A review was performed on the requested analyses. No results were rejected, and analytical completeness is 100%.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. The narrative noted sporadic ICV/CCV and internal standard discrepancies in one of the columns; in all cases, data were reported from an unaffected column. All this has been noted but falls outside of a 2A validation.

Qualification: None required.

Sample Delivery and Condition – All samples arrived intact at the laboratory in acceptable condition and temperature and were properly preserved.

Qualification: None required.

Holding Times – All samples were prepared and analyzed within their required holding times. The narrative noted that mercury and PCB Aroclors samples were frozen to extend holding times; this is in accordance with the QAPP archiving protocols. All mercury samples were analyzed on day 264 or 265 from collection,

which is greater than the 180-day holding time for frozen mercury samples. All mercury results are detections and should be qualified J, reason code HTA.

***Qualification:* All mercury results are qualified J, reason code HTA.**

Method Blanks – All method blanks were free from contamination.

Qualification: None required.

Rinsate Blanks – Equipment rinse blank EB01-10052022 (results reported in SDG 22J0175) is associated with all sample results reported in this SDG. The rinse blank was contaminated with low levels of chromium; chromium is not a target analyte for riverbank soil samples and no qualification is required.

Qualification: None required.

Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) – All LCS/LCSD %Rs and RPDs were within QAPP control limits. A standard reference material was also reported for each PCB, metals, and mercury preparation batch; the SRM %Rs met the control limits.

Qualification: None required.

Surrogates – All surrogates were within QAPP control limits or were a single discrepancy outside the control limits but within the limits for a single discrepancy set by the HGL consistency memo.

Qualification: None required.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) –

An MS/MSD was performed on sample SIB-099-OHW-1-2-100742022 (Method 8082A) and had all %R and RPDs within QAPP control limits.

Qualification: None required.

An MS/MSD was performed on sample SIB-104-TOB-1-2-10062022 (metals) and had all %R and RPDs within QAPP control limits except for the method 7471B MS/MSD in batch BLF0646, which is associated with all mercury results in this SDG. The MSD showed an extremely low %R (<30%) and a high RPD for Mercury. All Mercury results are detections and should be qualified J with reason code MSLX,MSP.

***Qualification:* All mercury results are qualified J, reason code MSLX,MSP.**

Field Duplicate – A field duplicate was not submitted with the samples in this SDG.

Qualification: None required.

Laboratory Duplicate – A laboratory duplicate was performed on sample SIB-104-TOB-1-2-10062022 (metals). All the RPDs of the duplicate pairs met the acceptance criteria except for Arsenic in method 6020B UCT-KED Batch BLF0645, which is associated with all arsenic results in this SDG. All arsenic results are detections and should be qualified J, with reason code LDPR.

***Qualification:* All arsenic results are qualified J, reason code LDPR.**

Compound Quantitation – Analyte results were reported with the associated DL, LOD, and LOQ in the DoD format instead of with the associated MDL and RL. Non-detected results were reported on the hardcopy as <#, where # corresponds to the LOD. The HGL reviewer confirmed that the value associated with non-detected results in the EDD is the MDL, in accordance with the project reporting requirements. Analytes

detected between the MDL and RL were reported as J-qualified results by the laboratory. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table (concentrations in µg/kg [Aroclors] or mg/kg [metals]):

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-104-TOB-1-2-10062022	Mercury	0.0311	H	0.0311	J	HTA,MSLX,MSP
	Arsenic	4.78	D	4.78	J	LDPR
SIB-102-TOB-1-2-10062022	Mercury	0.0742	H	0.0742	J	HTA,MSLX,MSP
	Arsenic	2.97	D	2.97	J	LDPR
SIB-102-TOB-2-3-10062022	Mercury	0.2	H	0.2	J	HTA,MSLX,MSP
	Arsenic	2.77	D	2.77	J	LDPR
SIB-102-MLW-1-2-10062022	Mercury	0.0526	H	0.0526	J	HTA,MSLX,MSP
	Arsenic	3.63	D	3.63	J	LDPR
SIB-101-TOB-1-2-10062022	Mercury	0.0237	H	0.0237	J	HTA,MSLX,MSP
	Arsenic	1.96	D	1.96	J	LDPR
SIB-100-OHW-1-2-10062022	None required.					
SIB-100-OHW-2-3-10062022	None required.					
SIB-100-TOB-1-2-10062022	None required.					
SIB-100-TOB-2-3-10062022	None required.					
SIB-099-OHW-1-2-10062022	None required.					
SIB-099-TOB-1-2-10072022	None required.					
SIB-099-TOB-2-3-10072022	None required.					
SIB-098-OHW-1-2-10072022	None required.					
SIB-098-OHW-2-3-10072022	None required.					
SIB-098-TOB-1-2-10072022	Mercury	0.0938	H	0.0938	J	HTA,MSLX,MSP
	Arsenic	3.74	D	3.74	J	LDPR
SIB-098-TOB-2-3-10072022	Mercury	0.0318	H	0.0318	J	HTA,MSLX,MSP
	Arsenic	3.75	D	3.75	J	LDPR
SIB-097-OHW-1-2-10072022	Mercury	0.0521	H	0.0521	J	HTA,MSLX,MSP
	Arsenic	2.91	D	2.91	J	LDPR

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-097-TOB-1-2-10072022	Mercury	0.0854	H	0.0854	J	HTA,MSLX,MSP
	Arsenic	3.69	D	3.69	J	LDPR
SIB-096-OHW-1-2-10072022	Mercury	0.0551	H	0.0551	J	HTA,MSLX,MSP
	Arsenic	16.4	D	16.4	J	LDPR