Stage 2A Review
Data Quality Control (QC)

Site: PHSS-SIB PDI	SDG #: Case 22J0324
Laboratory: ARI	Date: 8/15/2023
HydroGeoLogic, Inc. Reviewer: Deanna Valdebenito Peer Reviewer: Ken Rapuano (8.29.23)	Project: DT2002

Client Sample ID	Laboratory Sample ID	Analyses	Matrix
SIB-066-MLW-0-1-10182022	22J0324-01	PCB Aroclors and Total Metals	Solid
SIB-066-MLW-1-2-1018202	22J0324-02	PCB Aroclors and Total Metals	Solid
SIB-066-OHW-0-1-10182022	22J0324-03	PCB Aroclors and Total Metals	Solid
SIB-066-OHW-1-2-1018202	22J0324-04	PCB Aroclors and Total Metals	Solid
SIB-066-OHW-2-3-10182023	22J0324-05	PCB Aroclors and Total Metals	Solid
SIB-066-TOB-0-1-10182022	22J0324-06	PCB Aroclors and Total Metals	Solid
SIB-066-TOB-1-2-10182022	22J0324-07	PCB Aroclors and Total Metals	Solid
SIB-066-TOB-2-3-1018202	22J0324-08	PCB Aroclors and Total Metals	Solid
FD09-10182022	22J0324-09	PCB Aroclors and Total Metals	Solid
SIB-063-TOB-0-1-10182022	22J0324-10	PCB Aroclors and Total Metals	Solid
SIB-063-OHW-0-1-10182022	22J0324-11	PCB Aroclors and Total Metals	Solid
SIB-063-MLW-0-1-10182022	22J0324-12	PCB Aroclors and Total Metals	Solid
SIB-063-MLW-1-2-10182022	22J0324-13	PCB Aroclors and Total Metals	Solid
SIB-065-MLW-0-1-10182022	22J0324-14	PCB Aroclors and Total Metals	Solid
SIB-065-MLW-1-2-1018202	22J0324-15	PCB Aroclors and Total Metals	Solid
SIB-065-OHW-0-1-10182022	22J0324-16	PCB Aroclors and Total Metals	Solid
SIB-065-OHW-1-2-10182022	22J0324-17	PCB Aroclors and Total Metals	Solid
SIB-065-OHW-2-3-10182023	22J0324-18	PCB Aroclors and Total Metals	Solid
SIB-065-TOB-0-1-10182022	22J0324-19	PCB Aroclors and Total Metals	Solid
SIB-065-TOB-1-2-10182022	22J0324-20	PCB Aroclors and Total Metals	Solid
SIB-065-TOB-2-3-1018202	22J0324-21	PCB Aroclors and Total Metals	Solid
FD10-10182022	22J0324-22	PCB Aroclors and Total Metals	Solid
SIB-064-MLW-0-1-10182022	22J0324-23	PCB Aroclors and Total Metals	Solid
SIB-064-MLW-1-2-1018202	22J0324-24	PCB Aroclors and Total Metals	Solid
SIB-064-OHW-0-1-10182022	22J0324-25	PCB Aroclors and Total Metals	Solid
SIB-064-OHW-1-2-10182022	22J0324-26	PCB Aroclors and Total Metals	Solid
SIB-064-OHW-2-3-10182023	22J0324-27	PCB Aroclors and Total Metals	Solid
SIB-064-TOB-0-1-10182022	22J0324-28	PCB Aroclors and Total Metals	Solid
SIB-064-TOB-1-2-10182022	22J0324-29	PCB Aroclors and Total Metals	Solid
SIB-064-TOB-2-3-1018202	22J0324-30	PCB Aroclors and Total Metals	Solid
SIB-062-TOB-0-1-10182022	22J0324-31	PCB Aroclors and Total Metals	Solid
SIB-062-OHW-0-1-10182022	22J0324-32	PCB Aroclors and Total Metals	Solid
SIB-062-MLW-0-1-10182022	22J0324-33	PCB Aroclors and Total Metals	Solid

Client Sample ID	Laboratory Sample ID	Analyses	Matrix
SIB-062-MLW-1-2-1018202	22J0324-34	PCB Aroclors and Total Metals	Solid
SIB-061-MLW-0-1-1019202	22J0324-35	PCB Aroclors and Total Metals	Solid
SIB-061-OHW-0-1-1019202	22J0324-36	PCB Aroclors and Total Metals	Solid
SIB-060-MLW-0-1-1019202	22J0324-37	PCB Aroclors and Total Metals	Solid
SIB-060-OHW-0-1-1019202	22J0324-38	PCB Aroclors and Total Metals	Solid
SIB-059-MLW-0-1-1019202	22J0324-39	PCB Aroclors and Total Metals	Solid
SIB-059-OHW-0-1-1019202	22J0324-40	PCB Aroclors and Total Metals	Solid
SIB-058-MLW-0-1-10192022	22J0324-41	PCB Aroclors and Total Metals	Solid
SIB-058-OHW-0-1-10192022	22J0324-42	PCB Aroclors and Total Metals	Solid
FD11-10192022	22J0324-43	PCB Aroclors and Total Metals	Solid
SIB-057-MLW-0-1-10192022	22J0324-44	PCB Aroclors and Total Metals	Solid
SIB-057-OHW-0-1-10192022	22J0324-45	PCB Aroclors and Total Metals	Solid
SIB-057-TOB-0-1-10192022	22J0324-46	PCB Aroclors and Total Metals	Solid
SIB-057-TOB-1-2-10192022	22J0324-47	PCB Aroclors and Total Metals	Solid
SIB-056-MLW-0-1-10192022	22J0324-48	PCB Aroclors and Total Metals	Solid
SIB-056-OHW-0-1-10192022	22J0324-49	PCB Aroclors and Total Metals	Solid
SIB-056-TOB-0-1-10192022	22J0324-50	PCB Aroclors and Total Metals	Solid
SIB-055-TOB-0-1-10192022	22J0324-51	PCB Aroclors and Total Metals	Solid
SIB-055-OHW-0-1-10192022	22J0324-52	PCB Aroclors and Total Metals	Solid
SIB-054-TOB-0-1-10192022	22J0324-53	PCB Aroclors and Total Metals	Solid
SIB-054-OHW-0-1-10192022	22J0324-54	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 but one, data were reported from an unaffected column. The laboratory noted that the ICV and CCV associated with run SKL0034 had high %Ds for Aroclor 1260 in both columns. 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 was frozen to extend holding times; this is in accordance with the QAPP archiving protocols. All mercury analyses were performed within the 180-day holding time for frozen mercury samples.

Qualification: None required.

Method Blanks – All method blanks were free from contamination except for the blank for method 6020B batch BLA0693 which contained Lead contamination (0.08 mg/kg). All sample results for lead were greater than the qualification level of 0.4 mg/kg and no further qualification is required.

Qualification: None required.

Rinsate Blanks – Equipment rinse blank EB03-10192022 (results reported in SDG 22J0477) is associated with all sample results reported in this SDG. The rinse blank was contaminated with a low level of chromium; chromium is not a target analyte for sediment 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 – Samples SIB-061-MLW-0-1-1019202, SIB-060-OHW-0-1-1019202, SIB-059-MLW-0-1-1019202, SIB-058-MLW-0-1-10192022, FD11-10192022, SIB-056-OHW-0-1-10192022, SIB-056-TOB-0-1-10192022, SIB-055-TOB-0-1-10192022, SIB-055-OHW-0-1-10192022, and SIB-054-TOB-0-1-10192022 had a high %R for surrogates Decachlorobiphenyl and Decachlorobiphenyl [2C]. Samples SIB-061-OHW-0-1-1019202, SIB-059-OHW-0-1-1019202, SIB-058-OHW-0-1-10192022, and SIB-057-TOB-0-1-10192022 had a high %R for surrogate Decachlorobiphenyl [2C]; these discrepancies were above the allowance for a single discrepancy established by the HGL consistency memo. The detected Aroclor results for these samples should be qualified J with reason code SSH and non-detections should not be qualified.

Sample SIB-057-MLW-0-1-10192022 had a high %R for surrogate Decachlorobiphenyl and samples SIB-060-MLW-0-1-1019202 and SIB-056-MLW-0-1-10192022 had a high %R for decachlorobiphenyl [2C]; these discrepancies were within the allowance limits for a single discrepancy set by the HGL consistency memo and no qualification is required.

Qualification: The detected Aroclor results for samples SIB-061-MLW-0-1-1019202, SIB-060-OHW-0-1-1019202, SIB-059-MLW-0-1-1019202, SIB-058-MLW-0-1-10192022, FD11-10192022, SIB-056-OHW-0-1-10192022, SIB-056-TOB-0-1-10192022, SIB-055-TOB-0-1-10192022, SIB-055-OHW-0-1-10192022, SIB-054-TOB-0-1-10192022, SIB-061-OHW-0-1-1019202, SIB-059-OHW-0-1-1019202, SIB-058-OHW-0-1-10192022, and SIB-057-TOB-0-1-10192022 are qualified J with reason code SSH.

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

An MS/MSD was performed on samples SIB-066-TOB-0-1-10182022, SIB-065-TOB-0-1-10182022 and SIB-058-MLW-0-1-10192022 (Method 8082A) and had all %R and RPDs within QAPP control limits.

Qualification: None required.

An MS/MSD was performed on samples SIB-066-TOB-0-1-10182022 and SIB-058-MLW-0-1-10192022 (metals) and had all %R and RPDs within QAPP control limits.

Qualification: None required.

Field Duplicate – Field duplicates FD09-10182022, FD10-10182022, and FD11-10192022 are associated with parent samples SIB-066-OHW-0-1-10182022, SIB-065-OHW-0-1-10182022, and SIB-058-MLW-0-1-10192022, respectively. All results for each duplicate pair met QAPP precision criteria.

Qualification: None required.

Laboratory Duplicate – A laboratory duplicate was performed on samples SIB-066-TOB-0-1-10182022 and SIB-058-MLW-0-1-10192022 (metals). The RPDs of the duplicate pairs met the acceptance criteria except for Lead in batch BLA0723 (sample SIB-058-MLW-0-1-10192022) and Copper in batches BLA0693 and BLA0723 (SIB-066-TOB-0-1-10182022 and SIB-058-MLW-0-1-10192022, respectively).

Qualification: The lead results for samples FD11-10192022, SIB-054-OHW-0-1-10192022, SIB-054-TOB-0-1-10192022, SIB-055-OHW-0-1-10192022, SIB-055-TOB-0-1-10192022, SIB-056-MLW-0-1-10192022, SIB-056-OHW-0-1-10192022, SIB-056-TOB-0-1-10192022, SIB-057-MLW-0-1-10192022, SIB-057-OHW-0-1-10192022, SIB-057-TOB-0-1-10192022, SIB-058-MLW-0-1-10192022, SIB-058-OHW-0-1-10192022, SIB-059-MLW-0-1-1019202, SIB-059-OHW-0-1-1019202, SIB-060-MLW-0-1-1019202, SIB-060-OHW-0-1-1019202 and SIB-061-OHW-0-1-1019202 are qualified J with reason code LDPR. All copper results are qualified J with 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):

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-066-MLW-0-1-10182022	Copper	14	D	14	J	LDPR
SIB-066-MLW-1-2-1018202	None required.					
SIB-066-OHW-0-1-10182022	Copper	20	D	20	J	LDPR
SIB-066-OHW-1-2-1018202	None required.					
SIB-066-OHW-2-3-10182023	None required.					
SIB-066-TOB-0-1-10182022	Copper	16.5	D	16.5	J	LDPR
SIB-066-TOB-1-2-10182022	None required.					
SIB-066-TOB-2-3-1018202	None required.					
FD09-10182022	Copper	20	D	20	J	LDPR
SIB-063-TOB-0-1-10182022	Copper	25	D	25	J	LDPR
SIB-063-OHW-0-1-10182022	Copper	37.6	D	37.6	J	LDPR
SIB-063-MLW-0-1-10182022	Copper	39.2	D	39.2	J	LDPR
SIB-063-MLW-1-2-10182022	None required.					
SIB-065-MLW-0-1-10182022	Copper	17.1	D	17.1	J	LDPR
SIB-065-MLW-1-2-1018202	None required.					
SIB-065-OHW-0-1-10182022	Copper	16.8	D	16.8	J	LDPR
SIB-065-OHW-1-2-10182022	None required.					
SIB-065-OHW-2-3-10182023	None required.					
SIB-065-TOB-0-1-10182022	Copper	14.1	D	14.1	J	LDPR
SIB-065-TOB-1-2-10182022	None required.					
SIB-065-TOB-2-3-1018202	None required.					
FD10-10182022	Copper	15.3	D	15.3	J	LDPR
SIB-064-MLW-0-1-10182022	Copper	23.5	D	23.5	J	LDPR
SIB-064-MLW-1-2-1018202	None required.					
SIB-064-OHW-0-1-10182022	Copper	15.2	D	15.2	J	LDPR
SIB-064-OHW-1-2-10182022	None required.					
SIB-064-OHW-2-3-10182023	None required.					
SIB-064-TOB-0-1-10182022	Copper	17.7	D	17.7	J	LDPR

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-064-TOB-1-2-10182022	None required.					
SIB-064-TOB-2-3-1018202	None required.					
SIB-062-TOB-0-1-10182022	Copper	21.2	D	21.2	J	LDPR
SIB-062-OHW-0-1-10182022	Copper	205	D	205	J	LDPR
SIB-062-MLW-0-1-10182022	Copper	34.5	D	34.5	J	LDPR
SIB-062-MLW-1-2-1018202	None required.					
SIB-061-MLW-0-1-1019202	Aroclor 1254	297	D	297	J	SSH
	Aroclor 1260	139	D	139	J	SSH
	Copper	19.6	D	19.6	J	LDPR
SIB-061-OHW-0-1-1019202	Aroclor 1254	3.5	J	3.5	J	SSH
	Aroclor 1260	7.1	-	7.1	J	SSH
	Copper	18.7	D	18.7	J	LDPR
	Lead	16.9	D	16.9	J	LDPR
SIB-060-MLW-0-1-1019202	Copper	27.8	D	27.8	J	LDPR
	Lead	66.9	D	66.9	J	LDPR
SIB-060-OHW-0-1-1019202	Aroclor 1260	36.5	D	36.5	J	SSH
	Copper	38	D	38	J	LDPR
	Lead	51.9	D	51.9	J	LDPR
SIB-059-MLW-0-1-1019202	Aroclor 1248	61.6	D	61.6	J	SSH
	Aroclor 1254	143	D	143	J	SSH
	Aroclor 1260	113	D	113	J	SSH
	Copper	39.8	D	39.8	J	LDPR
	Lead	92.1	D	92.1	J	LDPR
SIB-059-OHW-0-1-1019202	Aroclor 1260	23.8	D	23.8	J	SSH
	Copper	23.1	D	23.1	J	LDPR
	Lead	101	D	101	J	LDPR
SIB-058-MLW-0-1-10192022	Aroclor 1260	38.9	D	38.9	J	SSH
	Copper	25.1	D	25.1	J	LDPR
	Lead	54.7	D	54.7	J	LDPR

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-058-OHW-0-1-10192022	Aroclor 1260	69.3	D	69.3	J	SSH
	Copper	37.2	D	37.2	J	LDPR
	Lead	84.2	D	84.2	J	LDPR
FD11-10192022	Aroclor 1260	46.8	D	46.8	J	SSH
	Copper	21.6	D	21.6	J	LDPR
	Lead	40.2	D	40.2	J	LDPR
SIB-057-MLW-0-1-10192022	Copper	37.1	D	37.1	J	LDPR
	Lead	127	D	127	J	LDPR
SIB-057-OHW-0-1-10192022	Copper	36.1	D	36.1	J	LDPR
	Lead	141	D	141	J	LDPR
SIB-057-TOB-0-1-10192022	Aroclor 1254	32.5	D	32.5	J	SSH
	Aroclor 1260	429	D	429	J	SSH
	Copper	37.3	D	37.3	J	LDPR
	Lead	59.9	D	59.9	J	LDPR
SIB-057-TOB-1-2-10192022	None required.					
SIB-056-MLW-0-1-10192022	Copper	25	D	25	J	LDPR
	Lead	81.9	D	81.9	J	LDPR
SIB-056-OHW-0-1-10192022	Aroclor 1260	27.4	D	27.4	J	SSH
	Copper	23.3	D	23.3	J	LDPR
	Lead	33.4	D	33.4	J	LDPR
SIB-056-TOB-0-1-10192022	Aroclor 1254	33.2	D	33.2	J	SSH
	Aroclor 1260	168	D	168	J	SSH
	Copper	36.5	D	36.5	J	LDPR
	Lead	87.9	D	87.9	J	LDPR
SIB-055-TOB-0-1-10192022	Aroclor 1254	27.2	D	27.2	J	SSH
	Aroclor 1260	60.9	D	60.9	J	SSH
	Copper	58.4	D	58.4	J	LDPR
	Lead	121	D	121	J	LDPR

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-055-OHW-0-1-10192022	Aroclor 1254	3.3	J	3.3	J	SSH
	Aroclor 1260	6.8	P1	6.8	J	SSH
	Copper	21.3	D	21.3	J	LDPR
	Lead	32.8	D	32.8	J	LDPR
SIB-054-TOB-0-1-10192022	Aroclor 1254	54.0	D	54.0	J	SSH
	Aroclor 1260	54.0	D	54.0	J	SSH
	Copper	118	D	118	J	LDPR
	Lead	245	D	245	J	LDPR
SIB-054-OHW-0-1-10192022	Copper	25.8	D	25.8	J	LDPR
	Lead	8.84	D	8.84	J	LDPR