Stage 2A Review
Data Quality Control (QC)

Site: PHSS-SIB PDI	SDG #: Case 23F0234
Laboratory: ARI	Date: 8/24/2023
HydroGeoLogic, Inc. Reviewer: Deanna Valdebenito Peer Reviewer: Ken Rapuano (8.28.23)	Project: DT2002

Client Sample ID	Laboratory Sample ID	Analyses	Matrix
SIB-079-MLW-1-2-10122022	23F0234-01	PCB Aroclors and Total Metals	Solid
SIB-079-OHW-1-2-10122022	23F0234-02	PCB Aroclors and Total Metals	Solid
SIB-079-TOB-1-2-10122022	23F0234-03	PCB Aroclors and Total Metals	Solid
SIB-078-OHW-1-2-10122022	23F0234-04	PCB Aroclors and Total Metals	Solid
SIB-078-TOB-0-1-10122022	23F0234-05	PCB Aroclors and Total Metals	Solid
SIB-077-MLW-1-2-10122022	23F0234-06	PCB Aroclors and Total Metals	Solid
SIB-077-OHW-1-2-10122022	23F0234-07	PCB Aroclors and Total Metals	Solid
SIB-076-MLW-1-2-10122022	23F0234-08	PCB Aroclors and Total Metals	Solid
SIB-076-TOB-1-2-10122022	23F0234-09	PCB Aroclors and Total Metals	Solid
SIB-082-MLW-1-2-10112022	23F0234-10	PCB Aroclors and Total Metals	Solid
SIB-075-OHW-1-2-10132022	23F0234-11	PCB Aroclors and Total Metals	Solid
SIB-075-TOB-1-2-10132022	23F0234-12	PCB Aroclors and Total Metals	Solid
SIB-074-OHW-1-2-10132022	23F0234-13	PCB Aroclors and Total Metals	Solid
SIB-074-TOB-1-2-10132022	23F0234-14	PCB Aroclors and Total Metals	Solid
SIB-073-OHW-1-2-10132022	23F0234-15	PCB Aroclors and Total Metals	Solid
SIB-073-TOB-1-2-10132022	23F0234-16	PCB Aroclors and Total Metals	Solid
SIB-072-MLW-1-2-10132022	23F0234-17	PCB Aroclors and Total Metals	Solid
SIB-072-OHW-1-2-10132022	23F0234-18	PCB Aroclors and Total Metals	Solid
SIB-072-TOB-1-2-10132022	23F0234-19	PCB Aroclors and Total Metals	Solid
SIB-072-TOB-2-3-10132022	23F0234-20	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 CCV 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 280 to 282 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 EB02-10102022 (results reported in SDG 22J0175) is associated with all sample results reported in this SDG. The rinse blank was free from contamination 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 with the exception of a high %R on the zb-35 column (column 2). All detected results for Aroclors 1248, 1254, 1260, 1262, and 1268 reported from column 2 should be qualified J based on validator judgment (reason code VJ).

Qualification: The following results are qualified J, with reason code VJ:

- ***SIB-079-MLW-1-2-10122022, Aroclor 1260***
- ***SIB-079-OHW-1-2-10122022, Aroclor 1260***
- ***SIB-077-MLW-1-2-10122022, Aroclor 1260***
- ***SIB-077-OHW-1-2-10122022, Aroclor 1260***
- ***SIB-076-TOB-1-2-10122022, Aroclor 1260***
- ***SIB-075-TOB-1-2-10132022, Aroclor 1254 and Aroclor 1260***
- ***SIB-075-TOB-1-2-10132022, Aroclor 1260***
- ***SIB-074-OHW-1-2-10132022, Aroclor 1260***
- ***SIB-074-TOB-1-2-10132022, Aroclor 1260***
- ***SIB-073-OHW-1-2-10132022, Aroclor 1254 and Aroclor 1260***
- ***SIB-073-OHW-1-2-10132022, Aroclor 1260***
- ***SIB-073-TOB-1-2-10132022, Aroclor 1254 and Aroclor 1260***
- ***SIB-073-TOB-1-2-10132022, Aroclor 1260***
- ***SIB-072-MLW-1-2-10132022, Aroclor 1254 and Aroclor 1260***
- ***SIB-072-MLW-1-2-10132022, Aroclor 1260***
- ***SIB-072-TOB-1-2-10132022, Aroclor 1260***
- ***SIB-072-TOB-2-3-10132022, Aroclor 1260***

Surrogates – All surrogates were within QAPP control limits except surrogate Decachlorobiphenyl [2C] for sample SIB-078-TOB-0-1-10/12/2022, which was above the upper control limit by more than 20%. All detected Aroclors reported for sample SIB-078-TOB-0-1-10122022 should be qualified J with reason code SSH.

Qualification: For sample SIB-087-TOB-2-3-10/10/2022 analyte Aroclor 1260 is qualified J-SSH.

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

An MS/MSD was performed on sample SIB-072-OHW-1-2-10/13/2022 (Method 8082A) and had all %R and RPDs within QAPP control limits except for low %Rs in the MS and MSD for Aroclor 1260. Detections for analytes Aroclor 1248, Aroclor 1254, Aroclor 1260, Aroclor 1262 and Aroclor 1268 in sample SIB-072-

OHW-1-2-10132022 should be qualified J and non-detections should be qualified UJ with reason code MSL.

Qualification: For sample SIB-072-OHW-1-2-10132022 analytes Aroclor 1262 and Aroclor 1268 are qualified UJ, reason code MSL; analytes Aroclor 1248, Aroclor 1254, and Aroclor 1260 are qualified J, reason code MSL.

An MS/MSD was performed on sample SIB-079-MLW-1-2-10122022 (metals) and had all %R and RPDs within QAPP control limits except for an extremely low %R (<30%) for Mercury in the MS and a high RPD. All mercury results in this SDG are detections and are associated with this MS/MSD. All detections for Mercury should be qualified J with reason codes MSLX, MSP.

Qualification: All mercury results are qualified J with reason codes 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 for samples SIB-079-MLW-1-2-10122022 (metals) and all RPDs of the duplicate pairs met the acceptance criteria except for Mercury in method 7471B and Lead in method 6020B. All mercury and lead results in this SDG are detections and are associated with this laboratory duplicate. All Mercury and Lead results should be qualified J with reason code LDPR.

Qualification: All mercury and lead 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 [Aroclors] or mg/kg [metals]):

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-079-MLW-1-2-10122022	Aroclor 1260	13.6	--	13.6	J	VJ
	Mercury	0.178	H	0.178	J	MSLX,MSP,LDPR
	Lead	15.7	D	15.7	J	LDPR
SIB-079-OHW-1-2-10122022	Aroclor 1260	11.8	--	11.8	J	VJ
SIB-079-TOB-1-2-10122022	Mercury	0.0247	H	0.0247	J	MSLX,MSP,LDPR
	Lead	20	D	20	J	LDPR
SIB-078-OHW-1-2-10122022	None required.					
SIB-078-TOB-0-1-10122022	Aroclor 1260	83.0	D	83.0	J	SSH
	Mercury	0.0858	H	0.0858	J	MSLX,MSP,LDPR
	Lead	62.4	D	62.4	J	LDPR
SIB-077-MLW-1-2-10122022	Aroclor 1260	3.1	D J	3.1	J	VJ
	Mercury	0.0456	H	0.0456	J	MSLX,MSP,LDPR
	Lead	6.99	D	6.99	J	LDPR
SIB-077-OHW-1-2-10122022	Aroclor 1260	25.8	--	25.8	J	VJ
	Mercury	0.063	H	0.063	J	MSLX,MSP,LDPR
	Lead	13	D	13	J	LDPR
SIB-076-MLW-1-2-10122022	Mercury	0.386	H	0.386	J	MSLX,MSP,LDPR
	Lead	16.6	D	16.6	J	LDPR
SIB-076-TOB-1-2-10122022	Aroclor 1260	55.1	--	55.1	J	VJ
	Mercury	0.0614	H	0.0614	J	MSLX,MSP,LDPR
	Lead	19.9	D	19.9	J	LDPR
SIB-082-MLW-1-2-10112022	Mercury	0.0354	H	0.0354	J	MSLX,MSP,LDPR
	Lead	5.56	D	5.56	J	LDPR
SIB-075-OHW-1-2-10132022	Mercury	0.0842	H	0.0842	J	MSLX,MSP,LDPR
	Lead	4.8	D	4.8	J	LDPR

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-075-TOB-1-2-10132022	Aroclor 1254	19.2	--	19.2	J	VJ
	Aroclor 1260	71.5	--	71.5	J	VJ
	Mercury	0.0481	H	0.0481	J	MSLX,MSP,LDPR
	Lead	13.5	D	13.5	J	LDPR
SIB-074-OHW-1-2-10132022	Aroclor 1260	15.9	--	15.9	J	VJ
SIB-074-TOB-1-2-10132022	Aroclor 1260	224	D	224	J	VJ
	Mercury	0.0692	H	0.0692	J	MSLX,MSP,LDPR
	Lead	28.3	D	28.3	J	LDPR
SIB-073-OHW-1-2-10132022	Aroclor 1254	18.4	--	18.4	J	VJ
	Aroclor 1260	54	--	54	J	VJ
	Mercury	0.152	H	0.152	J	MSLX,MSP,LDPR
	Lead	38.6	D	38.6	J	LDPR
SIB-073-TOB-1-2-10132022	Aroclor 1254	36.8	--	36.8	J	VJ
	Aroclor 1260	195	--	195	J	VJ
	Mercury	0.84	H	0.84	J	MSLX,MSP,LDPR
	Lead	22.7	D	22.7	J	LDPR
SIB-072-MLW-1-2-10132022	Aroclor 1254	5.3	--	5.3	J	VJ
	Aroclor 1260	11.1	--	11.1	J	VJ
SIB-072-OHW-1-2-10132022	Aroclor 1248	7.5	P1	7.5	J	MSL
	Aroclor 1254	14.4	-	14.4	J	MSL
	Aroclor 1260	38.2	-	38.2	J	MSL
	Aroclor 1262	< 2.0	U	< 2.0	UJ	MSL
	Aroclor 1268	< 2.0	U	< 2.0	UJ	MSL
	Mercury	0.35	H	0.35	J	MSLX,MSP,LDPR
	Lead	16.5	D	16.5	J	LDPR

Sample	Analyte	Lab Value	Lab Qualifier	Validated Value	Validated Qualifier	Reason Code
SIB-072-TOB-1-2-10132022	Aroclor 1260	122	--	122	J	VJ
	Mercury	0.0686	H	0.0686	J	MSLX,MSP,LDPR
	Lead	74.9	D	74.9	J	LDPR
SIB-072-TOB-2-3-10132022	Aroclor 1260	65.4	--	65.4	J	VJ
	Mercury	0.036	H	0.036	J	MSLX,MSP,LDPR
	Lead	30.3	D	30.3	J	LDPR