HGL Data Validation Review Report

Project Name/Number	PHSS-SIB PDI / DT2002
Data Validation Stage	2A
Laboratory	ALS Environmental
SDG	K2211700
HGL Reviewer	Ken Rapuano 8/31/23
HGL Peer Review	Justin Hersh 8/31/2023

General issues: The HGL reviewer ensured that all results with an interpreted_qualifiers of U or UJ had the corresponding detect_flag field populated with N and that all rows had Y in the validated_yn field.

The DV report used the higher of the method blank or equipment blank results (on-column) to qualify associated results. Although HGL's internal protocol is to use all applicable reason codes, using the reason code only associated with the highest associated blank is consistent with the NFG and is acceptable for this project.

Although equipment blank results are not validated, the method blank associated with equipment blank EB01-10052022 was contaminated with several target analytes, including DRO, RRO, BEHP, and the PAHs 2-methylnaphthalene, fluorene, and phenanthrene. In most cases, the concentration in the aqueous method blank was below the corresponding concentration found in the equipment blank and in the judgment of the HGL reviewer, it is appropriate to use the equipment blank to qualify any associated sample results for those analytes. However, the concentrations of BEHP and phenanthrene in EB01-10052022 are below the associated method blank concentration and these two analytes should be considered detected due to aqueous sample preparation contamination and not to cross-contamination of soil samples during sampling activities. Any changes to qualification or reason codes are discussed in the method-specific sections below.

Diesel Range Organics (DRO) and Residual Range Organics (RRO):

The DV report associated surrogate n-triacontane only with RRO; HGL's internal protocol is to associate surrogates with all reported results. Based on the number of carbons, the validator's judgment is accepted and no additional qualification is required.

Tributyltin:

No issues noted.

Organochlorine Pesticides:

No issues noted.

Bis(2-Ethylhexyl)phthalate; Polycyclic Aromatic Hydrocarbons (PAHs):

The DV report assigned U qualifiers to the phenanthrene results for four samples due to this compound being detected in the associated equipment blank. Phenanthrene was also detected in the method blank associated with these four samples. The U qualifier should be removed (see General Issues above) unless the sample result is also below the method blank qualification limit of 3.4 µg/kg (adjusted in raw data). Reason code EBL should be removed from these four results, replaced with MBL as applicable.

Sample	Analyte	Validated Result	Validated Qualifier	Modified Validated Qualifier	Modified Interpreted Qualifier	Modified Final Reason Code
SIB-120-MLW-0-1-10032022	Phenanthrene	2.6	U	U	U	MBL
SIB-120-TOB-0-1-10032022	Phenanthrene	12	U	--	--	--
SIB-113-TOB-0-1-10042022	Phenanthrene	8.8	U	--	--	--
FD01-10042022	Phenanthrene	11	U	--	--	--

Total Organic Carbon (TOC):

The DV report indicated that all analyses were performed within the holding time. The holding time for soil samples listed in the QAPP is incorrect. The HGL reviewer confirmed that all samples were analyzed within the correct holding time of 28 days.