Chemistry (Sediment/Elutriate/Tissue) Data Validation Worksheet

Project Name and File Number:

City and State:

Date:

Chemistry Data

Completeness Check	Y/N + Any Comments (for Lab/Applicant)	Data Validation Review Action/Comments (for Data Validator)
Title sheet identifying laboratory name, location, contact information		
Authorization statement and dated signature		
Analytical case narrative (i.e., data quality report)		
Sample identification table		
Method summary		
Sample results including date and time of analysis, (metric units, dry weight basis for sediment)		
QC results and acceptance criteria		
Signed Chain of Custody (COC) forms		
All non-detects met RIM reporting limits (RLs)		

PAHs (or pentachlorophenol for elutriates) Method:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? (Y/N) List Any Results Outside Criteria (for Lab/Applicant)	Data Validation Review Action/Comments (for Data Validator)
Sample Holding Time	*Aqueous:* ≤ 7 days (for extraction) and ≤ 40 days (for analysis) <6°C *Non-Aqueous:* ≤ 14 days (for extraction) and ≤ 40 days (for analysis) <6°C or frozen		
Standard Reference Materials	Within the limits provided by vendor (Provide vendor limits in laboratory report)		
Method Blank	No target analytes > MDL		
Equipment Blank (if applicable)	No target analytes > MDL		
Field Duplicates (if applicable)	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2xRL *Non-aqueous:* RPD <50% if sample or dup result <5xRL, then absolute value of the difference <4xRL		
LCS/LCSD	%Recovery 30-120 *Aqueous:* RPD 30% *Non-aqueous*: RPD <50%		
MS/MSD	% Recovery Limits: 30-120% RPD <50%		
Analytical Replicates	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2xRL *Non-aqueous:* RPD <50% if sample or dup result <5xRL, then absolute value of the difference <4xRL		
Surrogate Recoveries	% Recovery Limits: 30 - 150%		

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Pesticides Method:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? (Y/N) List Any Results Outside Criteria (for Lab/Applicant)	Data Validation Review Action/Comments (for Data Validator)
Sample Holding Time	*Aqueous:* ≤ 7 days (for extraction) and ≤ 40 days (for analysis) <6°C *Non-Aqueous:* ≤ 14 days (for extraction) and ≤ 40 days (for analysis) <6°C or frozen		
Standard Reference Materials	Within the limits provided by vendor (Provide vendor limits in laboratory report)		
Method Blank	No target analytes > MDL		
Equipment Blank (if applicable)	No target analytes > MDL		
Field Duplicates	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2xRL *Non-aqueous:* RPD <50% if sample or dup result <5xRL, then absolute value of the difference <4xRL		
LCS/LCSD	%Recovery 30-120 *Aqueous:* RPD 30% *Non-aqueous*: RPD <50%		
MS/MSD	% Recovery Limits: 30-120% RPD <50%		
Analytical Replicates	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2xRL *Non-aqueous:* RPD <50% if sample or dup result <5xRL, then absolute value of the difference <4xRL		
Surrogate Recoveries	% Recovery Limits: 30 - 150%		

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PCBs Method:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? (Y/N) List Any Results Outside Criteria (for Lab/Applicant)	Data Validation Review Action/Comments (for Data Validator)
Sample Holding Time	Aqueous and Non-Aqueous: ≤ 1 year (for extraction) and ≤ 40 days (for analysis) <6°C or frozen (solids)		
Standard Reference Materials	Within the limits provided by vendor (Provide vendor limits in laboratory report)		
Method Blank	No target analytes > MDL		
Equipment Blank (if applicable)	No target analytes > MDL		
Field Duplicates (If applicable)	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2xRL *Non-aqueous:* RPD <50% if sample or dup result <5xRL, then absolute value of the difference <4xRL		
LCS/LCSD	%Recovery 50-150 *Aqueous:* RPD 30% *Non-aqueous*: RPD <50%		
MS/MSD	% Recovery Limits: 50-150% RPD <50%		
Analytical Replicates	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2xRL *Non-aqueous:* RPD <50 if sample or dup result <5xRL, then absolute value of the difference <4xRL		
Surrogate Recoveries	% Recovery Limits: 30 - 150%		

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Metals Method:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? (Y/N) List Any Results Outside Criteria (for Lab/Applicant)	Data Validation Review Action/Comments (for Data Validator)
Sample Holding Time and preservation	Metals- *Aqueous*: < 180 days and received with pH<2; <6°C *Non-aqueous*: <180 days, <6°C or frozen Mercury- *Aqueous*: < 28 days and received with pH<2; <6°C *Non-aqueous*: <28 days <6°C or frozen		
Standard Reference Materials	Within the limits provided by vendor (Provide vendor limits in laboratory report)		
Method Blank	No target analytes > MDL		
Equipment Blank (if applicable)	No target analytes > MDL		
Field Duplicates (if applicable)	*Aqueous:* RPD<30% if sample or dup result <5xRL, then absolute value of the difference <2XRL *Non-aqueous:* RPD <50 if sample or dup result <5xRL, then absolute value of the difference <4xRL		
LCS/LCSD	%Recovery 70-130 *Aqueous:* RPD <20% *Non-aqueous*: RPD <35%		
MS/MSD	% Recovery Limits: 75-125% *Aqueous:* RPD <20% *Non-aqueous*: RPD <35% Was a post-digestion spike done? If so, what was the % recovery?		
Analytical Replicates	*Aqueous:* RPD<20% if sample or dup result <5xRL, then absolute value of the difference <RL *Non-aqueous:* RPD <35% if sample or dup result <5xRL, then absolute value of the difference <2xRL		

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Total Organic Carbon (TOC) and Grain Size Method:

Quality Control (QC) Element	Acceptance Criteria*	Criteria Met? (Y/N) List Any Results Outside Criteria (for Lab/Applicant)	Data Validation Review Action/Comments (for Data Validator)
Grain Size: Analytical Replicates	RPD < 50%		
Total Organic Carbon: Standard Reference Materials	Within the limits provided by vendor (provide vendor limits in laboratory report)		
Total Organic Carbon: Analytical Replicates	RPD <50%		

* The Quality Control Acceptance Criteria are general guidelines. If alternate criteria are used, they must be documented in this table.

Qualifiers:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
- JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

To calculate RPD:

$$RPD = \frac{|S-D|}{(S+D)/2} \times 100$$

where S = sample result (original/parent) and D = duplicate result