

Table 8-7. Summary of Quality Control Procedures

QC Check	Minimum Frequency	Acceptance Criteria	Laboratory Corrective Action*
Ongoing Precision And Recovery	1 per analytical batch (≤ 20 samples)	Recovery within acceptance criteria in Table 8-8 of the QAPP guidance document	<ol style="list-style-type: none"> 1. Check calculations 2. Reanalyze batch
Stable-isotope-labeled compounds	Spiked into each sample for every target analyte	Recovery within limits in Table 8-8	<ol style="list-style-type: none"> 1. Check calculations 2. Qualify all associated results as estimated
		Ion abundance ratios must be within criteria in Table 9 of method 1613B	<ol style="list-style-type: none"> 1. Reanalyze specific samples. 2. Reject all affected results outside the criteria 3. Alternatively, use of secondary ions that meet appropriate theoretical criteria is allowed if interferences are suspect. This alternative must be approved by the DMMP agencies.
Laboratory duplicate	5% or 1 per batch (≤ 20 samples)	Relative percent Difference $\leq 30\%$	<ol style="list-style-type: none"> 1. Evaluation of the homogenization procedure and evaluation method 2. Reanalyze batch
Method blank	1 per analytical batch (≤ 20 samples)	Detection \leq minimum level in Table 2 of Method 1613B	<ol style="list-style-type: none"> 1. If the method blank results are greater than the reporting limit, halt analysis and find source of contamination; reanalyze batch. 2. Report project samples as non-detected for results \leq to the reported method blank values
GC/MS Tune	At the beginnings of each 12 hour shift. Must start and end each analytical sequence.	$>10,000$ resolving power @ $m/z304.9825$ Exact mass of 380.9760 within 5 ppm of theoretical value.	<ol style="list-style-type: none"> 1. Re-analyze affected samples 2. Reject all data not meeting method 1613B requirements
Initial Calibration	Initially and when continuing calibration fails.	Five point curve for all analytes. RSD must meet Table 4 requirements for all target compounds and labeled compounds. Signal to noise ratio	

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		(S/N) >10. Ion abundance (IA) ratios within method specified limits.	
Window Defining/Column Performance Mix	Before every initial and continuing calibration.	Valley <25% for all peaks near 2378-TCDD/F peaks.	
Continuing Calibration	Must start and end each analytical sequence.	%D must meet Table 4 limits for target compounds & labeled compounds. S/N >10. IA ratios within method specified limits.	
Confirmation of 2,3,7,8-TCDF	For all primary-column detections of 2,3,7,8-TCDF	Confirmation presence of 2,3,7,8-TCDF in accordance with method 1613B requirements	Failure to verify presence of 2,3,7,8-TCDF by second column confirmation requires qualification of associated 2,3,7,8-TCDF results as non-detected at the associated value.
Sample data not achieving target reporting limits or method performance in presence of possibly interfering compounds	Not applicable	Not applicable	Rather than simply dilute an extract to reduce interferences, the lab should perform additional cleanup techniques identified in the method to insure minimal matrix effects and background interference. Thereafter, dilution may occur. If re-analysis is required, the laboratory shall report both initial and re-analysis results.
Puget Sound Sediment Reference Material	One per analytical batch	Result must be within acceptance ranges (Table 8-10)	1. Extraction and analysis should be evaluated by the lab and re-analysis performed of the entire sample batch once performance criteria can be met. 2. If analysis accompanies several batches with acceptable PS-SRM results, then the laboratory can narrate possible reason for PS-SRM outliers.

* If re-analysis is required, the laboratory shall report initial and re-analysis results