

SUMMARY TABLE OF QA/QC—Continued

Status	Process or element	QA/QC specification	Acceptance criteria	Checking frequency	Suggested corrective action
M .....	Analyzer & Calibration Gas Performance.	Analyzer calibration error.	<2 percent of the manufacturer certified concentration for the mid- and span-level calibration gases (or 2 percent of span if not subject to an emission standard); for the zero gas less than $\pm 0.25\%$ of span.	Before initial run and after failed sampling system bias test.	Fix problem; retest.
M .....	System Performance .....	Sampling system bias ...	5% of std for high-level and zero gas; where emission std is $\leq 10$ ppmv, there is a temporary alternative if the absolute value of the bias is $\leq 0.50$ ppmv.	Before/after each run ....	Fix problem; retest.
M .....	System Performance .....	System response time ...	Determines minimum sampling time per point.	During initial sampling system bias test.	
M .....	System Performance .....	NO <sub>2</sub> –NO conversion efficiency.	>90% of certified value	After every test .....	Fix problem or replace equipment.
M .....	System Performance .....	Minimum sample time ...	2 times the system response time plus purge time.	Each sample point.	
M .....	System Performance .....	Stable sample flow rate (surrogate for maintaining system response time).	< $\pm 5\%$ of required flow ..	Each run .....	Adjust flow.
M .....	Sample Point Selection	Follow Method 1 OR.			
A .....	.....	Stratification test .....	<5% of mean = 1-point <10% of mean = 3-point	Prior to or during first run.	Relocate or follow Method 1.
A .....	Multiple Sample Points Simultaneously.	No. of openings in probe	Single or multihole (rake).	Each run .....	Change the number.
M .....	Sample Line .....	Line material & temp (before dryer).	SS $\geq 140^\circ\text{C}$ , or $25^\circ\text{C}$ greater than the dew point until moisture removed.	Each run .....	Adjust temperature.
S .....	.....	Line material & temp(after dryer).	SS or PTFE; no heat req'd after dryer.	Each run.	
S .....	Calibration Valve .....	Material .....	SS .....	Each run .....	Replace valve.
S .....	Sample Pump .....	Material .....	Inert to sample constituents.	Verified if sampling system bias test is passed.	Replace pump.
S .....	Manifolding .....	Material .....	Inert to sample constituents.	Verified if bias test is passed.	Replace.
S .....	Moisture Removal .....	Equipment type (condenser or permeation dryer).	< $\pm 5\%$ target compound removal.	Verified if bias test is passed.	Replace equipment.
S .....	Particulate Removal .....	Inertness of filter .....	Pass sampling system bias test.	Verified if bias test is passed.	Replace filter.
S .....	.....	Filter temperature .....	Maintained $> 95^\circ\text{C}$ .		
M .....	Data Recording .....	Frequency .....	$\leq 1$ minute average .....	During run .....	Remeasure.
M .....	Data Parameters .....	Sample concentration range.	All 1-minute averages within analyzer range.	Each run .....	Note in report.
M .....	Data Quality Assessment Using Sampling System Bias Data.	Calculate upper and lower uncertainty limits for each run using the mean measured data, converter efficiency, and the largest and smallest sampling system bias for that run.	Additional requirement is that the apparent bias must be between $\pm 5\%$ of emission limit equivalent concentration or $< 1.5$ ppmv. See section 12.5 for equations and conditions.	Each Run.	