

## Recertification and Diagnostic Test Policy for Dilution-Extractive CEMS<sup>(1)</sup>

Event	Event Status <sup>(2)</sup>	RATA	7 Day Cal Error <sup>(3)</sup>	Cycle Time Test	Linearity Check	Calibration Error Test <sup>(4)</sup>	Submit an Event Record	Comments
O <sub>2</sub> or CO <sub>2</sub> as defined in	R	X	X		X	X	X	The rule indicates that the permanent replacement of an analyzer is a recertification event. EPA does not require the cycle time test in this case, since the analyzer is like-kind and the rest of the system is the same.  Modify the Monitoring Plan as necessary.
O <sub>2</sub> or CO <sub>2</sub> which does not qualify	R	X	X	X	X	X	X	The rule indicates that the permanent replacement of an analyzer is a recertification event. Thus, all tests are required.  Modify the Monitoring Plan as necessary.
Flowing								EPA will conditionally allow the abbreviated linearity check and the alternative system response check (see footnotes (5) and (6)).  For repair or replacement of other major components that are not listed here (e.g., major components of new monitoring technologies or monitoring technology not addressed in this policy), contact EPA for a case-by case ruling.
	D				(5)	X	A	
	D				(5)	X	A	
Filter	D			(6)		X	A	
	D			(6)	(5)	X	A	
	D			(6)	(5)	X	A	
	D				(5)	X	A	
	D				(5)	X	A	
	D				(5)	X	A	
	D				(5)	X	A	
	D				(5)	X	A	EPA will conditionally allow the abbreviated linearity check (see footnote (5)).

## Recertification and Diagnostic Test Policy for Dilution-Extractive CEMS<sup>(1)</sup>

Event	Event Status <sup>(2)</sup>	RATA	7 Day Cal Error <sup>(3)</sup>	Cycle Time Test	Linearity Check	Calibration Error Test <sup>(4)</sup>	Submit an Event Record	Comments
For repair or replacement of other minor components that are not listed here perform a diagnostic calibration error test.								
	D					X		EPA recommends that each facility develop its own list of major and minor components and document this list within their QA/QC plan. If there is uncertainty whether a component is major or minor, contact EPA for a case-by-case ruling.
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
	D					X		
in CEMS shelter	D					X		
in CEMS shelter	D					X		EPA recommends performing both a pressure and vacuum leak check. The term "sample tubing" includes any sample or calibration tubing, the sample or calibration manifold, and the solenoid valve.
or pressure pump	D					X		EPA recommends that a leak check be performed, also.
on system with	R	X	X	(6)	X	X	X	Changing the size of the critical orifice (outside the manufacturer's tolerances for individual orifices) will significantly change the dilution ratio, may cause moisture problems and could introduce additional bias into the CEM system. Therefore, recertification testing must be performed.

## Recertification and Diagnostic Test Policy for Dilution-Extractive CEMS<sup>(1)</sup>

Event	Event Status <sup>(2)</sup>	RATA	7 Day Cal Error <sup>(3)</sup>	Cycle Time Test	Linearity Check	Calibration Error Test <sup>(4)</sup>	Submit an Event Record	Comments
on system with the manufacturer's	D				(5)	X	A	EPA will conditionally allow the abbreviated linearity check (see footnote (5)).
ation probe for	D				(5)	X	A	EPA recommends performing both a pressure and vacuum leak check.  EPA will conditionally allow the abbreviated linearity check (see footnote (5)).
ne	D	X		(6)		X	X	EPA believes that permanently replacing an umbilical line can introduce bias into the system. Therefore, a RATA is necessary. Sources can use conditional data validation to minimize loss of data.  EPA recommends performing both a pressure and vacuum leak check.
be length,	D			(6)	(5)	X	A	Potential non-linear response with the new probe requires a linearity check.  EPA will conditionally allow the abbreviated linearity check and the alternative system response check to be performed (see footnotes (5) and (6)).  EPA recommends performing both a pressure and vacuum leak check.
ation	R	X		(6)		X	X	The rule indicates that a probe location change is a recertification event.  EPA will conditionally allow the alternative system response check to be performed (see footnote (6)).
e (e.g., clean or	D					X		
line heaters	D					X		
in-situ CEMS	R	X	X	X	X	X	X	The rule indicates that the permanent replacement of a system is a recertification event. Thus, all tests are required.  Modify the Monitoring Plan, as necessary.

Recertification and Diagnostic Test Policy for Dilution-Extractive CEMS<sup>(1)</sup>

Event	Event Status <sup>(2)</sup>	RATA	7 Day Cal Error <sup>(3)</sup>	Cycle Time Test	Linearity Check	Calibration Error Test <sup>(4)</sup>	Submit an Event Record	Comments
Dilution-Extractive CEMS	R	X	X	X	X	X	X	The rule indicates that the permanent replacement of a system is a recertification event. Thus, all tests are required.  Modify the Monitoring Plan, as necessary.
Out-of-stack (Catalytic Converter)	R	X	X	X	X	X	X	EPA considers this to be equivalent to a monitoring system replacement. The rule indicates that the permanent replacement of a system is a recertification event. Thus, all tests are required.
Air supply	D				(5)	X	A	EPA will conditionally allow the abbreviated linearity check (see footnote (5)).  EPA recommends performing both a pressure and vacuum leak check.

<sup>(1)</sup> Events are listed in § 75.20 (c)(1).  
<sup>(2)</sup> "R" means replacement event, and "D" means diagnostic test event.  
<sup>(3)</sup> A linearity test is not required for a "regular" non-redundant backup system (§ 75.20(d)(2)(i)).  
<sup>(4)</sup> A calibration error test is required after every repair or corrective maintenance event that may affect system accuracy (Part 75, Appendix B, Section 2.1.3 (a)). If conditional data validation is used, a calibration error test is required (§ 75.20 (b)(3)(ii)).  
<sup>(5)</sup> A linearity check is recommended. However, an abbreviated linearity check is conditionally allowed (see Addendum, below). If the abbreviated test is not passed, consider it to be a failure and perform a full linearity check. Note: SO<sub>2</sub> and NO<sub>x</sub> monitors with span values ≤ 30 ppm are exempted from linearity checks.  
However, the alternative system response check is conditionally allowed. If the system response check is not passed, perform a full cycle time test.  
A <QACertificationEventData> record must be reported.  
A <QACertificationEventData> record only if the full linearity check or cycle time test is performed. Keep the results of all successful alternative diagnostic tests on-site and do not report