AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

Subpart E procedure	Performance test	Performance specification	Test conditions	Part 50, appendix L reference
§ 53.56 Barometric pressure effect test.	Sample flow rate ..... 1. Mean ..... 2. Regulation ..... 3. Meas. accuracy ..... 4. CV accuracy ..... 5. Pressure meas. accuracy. 6. Proper operation.	1. 16.67 ± 5%, L/min ..... 2. 2%, max ..... 3. 2%, max ..... 4. 0.3% max ..... 5. 10 mm Hg	(a) 6-hour normal operational test. (b) Normal conditions ..... (c) Additional 55 mm Hg pressure drop to simulate loaded filter. (d) Barometric pressure at 600 and 800 mm Hg.	Sec. 7.4.1. Sec. 7.4.2. Sec. 7.4.3. Sec. 7.4.5. Sec. 7.4.9.
§ 53.57 Filter temperature control test.	1. Filter temp. meas. accuracy. 2. Ambient temp. meas. accuracy. 3. Filter temp. control accuracy, sampling and non-sampling.	1. 2 °C ..... 2. 2 °C ..... 3. Not more than 5 °C above ambient temp. for more than 30 min.	(a) 4-hour simulated solar radiation, sampling. (b) 4-hour simulated solar radiation, non-sampling. (c) Solar flux of 1000 ± 50 W/m^2.	Sec. 7.4.8. Sec. 7.4.10. Sec. 7.4.11.
§ 53.58 Field precision test.	1. Measurement precision. 2. Storage deposition test for sequential samplers.	1. P_j < 2 μg/m^3 or RP_j < 5%. 2. 50 μg max. average weight gain/blank filter.	(a) 3 collocated samplers at 1 site for at least 10 days. (b) $PM_{2.5}$ conc. > 3 μg/m^3 ... (c) 24- or 48-hour samples (d) 5- or 10-day storage period for inactive stored filters.	Sec. 5.1. Sec. 7.3.5. Sec. 8. Sec. 9. Sec. 10.
The Following Requirement Is Applicable to Class I Candidate Equivalent Methods Only				
§ 53.59 Aerosol transport test.	Aerosol transport	97%, min. for all channels..	Determine aerosol transport through any new or modified components with respect to the reference method sampler before the filter for each channel.	

[72 FR 32208, June 12, 2007]

TABLE E–2 TO SUBPART E OF PART 53—SPECTRAL ENERGY DISTRIBUTION AND PERMITTED TOLERANCE FOR CONDUCTING RADIATIVE TESTS

Characteristic	Spectral Region			
	Ultraviolet		Visible	Infrared
Bandwidth (μm)	0.28 to 0.32	0.32 to 0.40	0.40 to 0.78	0.78 to 3.00
Irradiance (W/m^2)	5	56	450 to 550	439
Allowed Tolerance	±35%	±25%	±10%	±10%

[62 FR 38799, July 18, 1997; 63 FR 7714, Feb. 17, 1998]

FIGURE E–1 TO SUBPART E OF PART 53—DESIGNATION TESTING CHECKLIST

DESIGNATION TESTING CHECKLIST

Auditee _____ Auditor signature _____ Date _____

Compliance Status: Y = Yes N = No NA = Not applicable/Not available				
Verification			Verified by Direct Observation of Process or of Documented Evidence: Performance, Design or Application Spec. Corresponding to Sections of 40 CFR Part 53 or 40 CFR Part 50, Appendix L	Verification Comments (Includes documentation of who, what, where, when, why) (Doc. #, Rev. #, Rev. Date)
Y	N	NA		
			Performance Specification Tests Sample flow rate coefficient of variation (§ 53.53) (L–7.4.3)	
			Filter temperature control (sampling) (§ 53.57) (L–7.4.10)	

Compliance Status: Y = Yes N = No NA = Not applicable/Not available				Verification Comments (Includes documentation of who, what, where, when, why) (Doc. #, Rev. #, Rev. Date)
Verification			Verified by Direct Observation of Process or of Documented Evidence: Performance, Design or Application Spec. Corresponding to Sections of 40 CFR Part 53 or 40 CFR Part 50, Appendix L	
Y	N	NA		
			Elapsed sample time accuracy (§ 53.54) (L–7.4.13)	
			Filter temperature control (post sampling) (§ 53.57) (L–7.4.10)	
			Application Specification Tests	
			Field Precision (§ 53.58) (L–5.1)	
			Meets all Appendix L requirements (part 53, subpart A, § 53.2(a)(3)) (part 53, subpart E, § 53.51(a),(d))	
			Filter Weighing (L–8)	
			Field Sampling Procedure (§ 53.30, .31, .34)	
			Design Specification Tests	
			Filter (L–6)	
			Range of Operational Conditions (L–7.4.7)	
The Following Requirements Apply Only to Class I Candidate Equivalent Methods				
			Aerosol Transport (§ 53.59)	

FIGURE E–2 TO SUBPART E OF PART 53—PRODUCT MANUFACTURING CHECKLIST

PRODUCT MANUFACTURING CHECKLIST

Auditee Auditor signature Date

Compliance Status: Y = Yes N = No NA = Not applicable/Not available				Verification Comments (Includes documentation of who, what, where, when, why) (Doc. #, Rev. #, Rev. Date)
Verification			Verified by Direct Observation of Process or of Documented Evidence: Performance, Design or Application Spec. Corresponding to Sections of 40 CFR Part 53 or 40 CFR Part 50, Appendix L	
Y	N	NA		
			Performance Specification Tests	
			Assembled operational performance (Burn-in test) (§ 53.53)	
			Sample flow rate (§ 53.53) (L–7.4.1, L–7.4.2)	
			Sample flow rate regulation (§ 53.53) (L–7.4.3)	
			Flow rate and average flow rate measurement accuracy (§ 53.53) (L–7.4.5)	
			Ambient air temperature measurement accuracy (§ 53.55) (L–7.4.8)	
			Ambient barometric pressure measurement accuracy (§ 53.56) (L–7.4.9)	
			Sample flow rate cut-off (§ 53.53) (L–7.4.4)	
			Sampler leak check facility (§ 53.52) (L–7.4.6)	
			Application Specification Tests	
			Flow rate calibration transfer standard (L-9.2)	
			Operational /Instructional manual (L-7.4.18)	
			Design Specification Tests	
			Impactor (jet width) (§ 53.51(d)(1)) (L-7.3.4.1)	